DOCUMENT RESUME

ED 222 311 RC 013 528

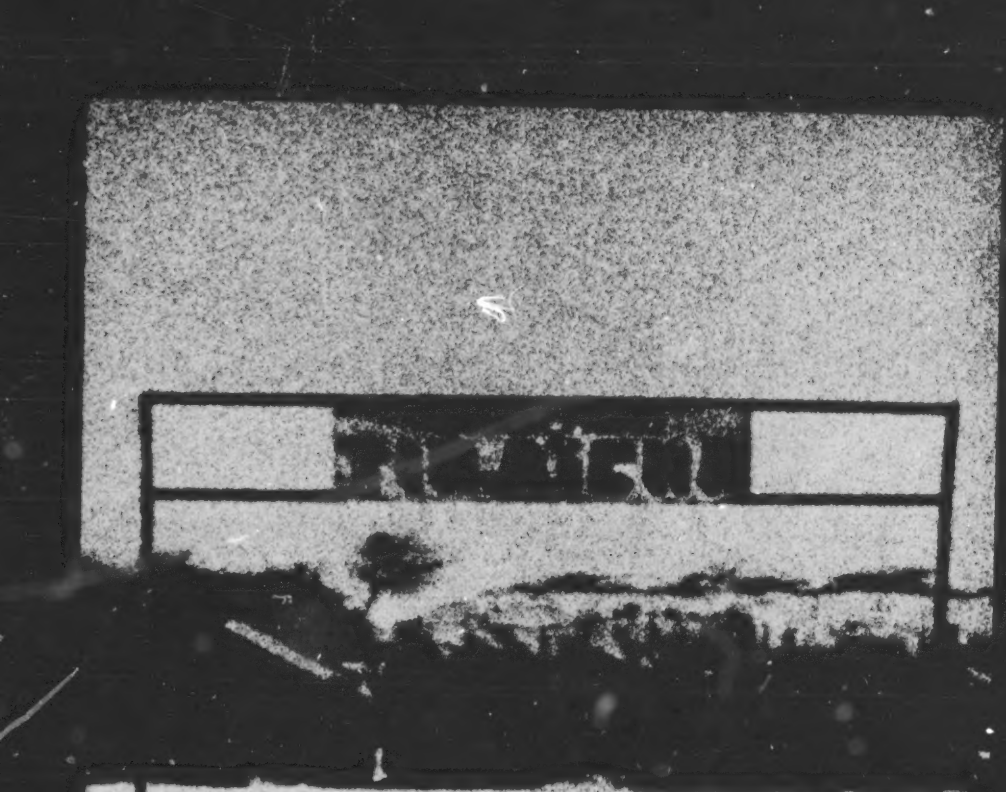
TITLE Tin Aicha Nomad Village.
INSTITUTION American Friends Service Committee, Philadelphia, Pa.
PUB DATE 82
NOTE 209p.
AVAILABLE FROM International Division, American Friends Service Committee, 1501 Cherry Street, Philadelphia, PA 19102 ($10.00).

EDRS PRICE MF01/PC09 Plus Postage.
DESCRIPTORS Agricultural Production; *Cooperative Programs; *Developing Nations; Foreign Countries; Functional Literacy; Health Programs; *Nomads; Program Descriptions; *Program Development; *Rehabilitation Programs; Religious Organizations; Rural Areas; Rural Education; Vocational Education
IDENTIFIERS *Mali

ABSTRACT

The report details some aspects of the American Friends Service Committee's (AFSC) and the Mali government's cooperative rehabilitation project for nomad families along the shores of Lake Faguibine. Covering the years 1975-81, the report contains five sections. The introduction provides background information on nomads and the Sahel; drought, famine, and relief; and AFSC experience. The AFSC project exploration section describes the field visits in 1973 and 1974; project assessment, comparison, and decision; and an outline on the Malian national recovery plan. Project planning and definition are covered in the third section. In section 4, a review of the project includes: profiles of the seven Tin Aicha family heads; the population and personnel; agriculture, livestock and herding, and tree planting and reforestation; health, nutrition, education, and functional literacy; and village government, weekly market, cooperative store, and permanent buildings. Section 5 "Assessment and Conclusions," encompasses the field evaluation; livestock, land, school, health, and settlement; reflections from the seven family heads; and lessons for AFSC program planners. Appendices provide a chronology, Tin Aicha review, local view of Tin Aicha in 1980, welcoming address for AFSC executive secretary, seminar report, and financial summary. (AH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****



BEST COPY AVAILABLE

TIN AICHA
Nomad Village

The American Friends Service Committee
Philadelphia, Pennsylvania

This report has been prepared by the Africa Program of the International Division of the American Friends Service Committee at the request of the Africa Panel of the International Division Executive Committee. While received with gratitude by the Board of Directors of the American Friends Service Committee, it does not constitute an official statement of that body.

Copyright © 1982 by the American Friends Service Committee

Library of Congress Catalogue Card Number 81-71694

Cover photograph by R. Todd Hoffman

Printed in house by the American Friends Service Committee
1501 Cherry Street
Philadelphia, Pennsylvania 19102
June 1982

CONTENTS

ILLUSTRATIONS 9
TABLES 11
ACKNOWLEDGEMENTS 13
PREFACE 15

1. INTRODUCTION 21
Nomads and the Sahel 21
Drought, Famine, and Relief 24
AFSC Experience in West Africa 26

2. AFSC PROJECT EXPLORATION 33
Field Visit, 1973 34
Field Visit, 1974 35
Project Assessment, Comparison, and Decision 36
Outline of the Malian National Recovery Plan 38

3. PROJECT PLANNING AND DEFINITION 41
Budget and Finances 42

4. PROJECT REVIEW 51
Introduction 51
Profiles of Seven Tin Aicha Family Heads 51
The Population 62
Personnel 65
Agriculture 67
Livestock and Herding 73
Tree Planting and Reforestation 79
Health and Nutrition 81
Education 85
Functional Literacy 89
Village Government 89
Weekly Market 92
The Cooperative Store 96
Permanent Buildings—Construction 101

6

5. ASSESSMENT AND CONCLUSIONS 113
Part-I: Evaluation from the Field 113
Livestock 115
Land 116
The School 116
Health 117
The Question of Settlement 117
Part II: Reflections from the Seven Family Heads 118
Part III: Lessons for AFSC Program Planners 125

APPENDICES 137

ILLUSTRATIONS

MAPS

1. Africa 17
2. *Cercles* of the Niger Bend 31
3. Part of the *Cercle* of Goundam 32
4. Tin Aicha 45
5. Tin Aicha and Lake Faguibine 46

FIGURES

6. Sketch of Tin Aicha Field 70
7. Government Organization and the Tin Aicha Project 91
8. Weekly Market Sites 93
9. Tin Aicha and Market 93
10. Construction Materials and Costs 102
11. Construction Sketches
a. Position of Cooperative Store and Dispensary 103
b. Cooperative Store 104
c. Dispensary 105
d. Position of School 106
e. School 107
f. School's Auxiliary Buildings 108
g. Classroom Building Floor Plan 109
h. School Construction Detail 110

TABLES

I. 1975 Budget	44
II. Population by Age	63
III. Population by Ethnic Group and Geographic Origin	64
IV. Family Size	65
V. Herd Size	78
VI. Herd Value	79
VII. Ruralization Equipment Provided to the Tin Aicha School	87
VIII. Number of Students, Tin Aicha School	88
IX. Sellers, Tin Aicha Market, July/August 1979	94
X. Goods Available, Tin Aicha Market	95
XI. Cooperative's Goundam Purchases, April 1978 to March 1979	97
XII. Daily Sales, June 17, 1979, to July 1, 1979	98

The previous numbered page in the original document was blank

ACKNOWLEDGEMENTS

The American Friends Service Committee wishes to acknowledge and express sincere appreciation to the many people who have participated in the preparation of this report. In addition to the staffs within the International Division, Information Services, the Finance Department, and the Print Shop, we thank the seven family heads who live at Tin Aicha for their valuable insights and information (See Project Review, p. 51 and Assessments and Conclusions, pg. 118); Ambery ag Rhissa, Stephen Morrissey, Eva Mysliwiec, Oumarou ag Mohamed Ibrahim, and Selden Smith as writers; Henry Passmore, Beth Perry, and Oliver Rogers as readers representing the Africa Panel; R. Todd Hoffman for photographs; Deborah Courter for design and layout; Susan Corson-Finnerty for proofreading; Cheryl McCool for typing; Patricia Disque for word processing; Avis Parker for typesetting; Theodore D. Robinson II for lithography; David Nuss for presswork; and Dian Fatula for editing and general oversight

The previous numbered page in the original document was blank

PREFACE

In response to the suffering caused by the Sahelian drought of 1968-1974, the American Friends Service Committee (AFSC) and the Government of Mali cooperated in a rehabilitation project for nomad families along the shores of Lake Faguibine. Beginning in 1975, the AFSC provided a resident representative and project funds, while the Government secured arable land, emergency food and medical supplies, and provided Malian technical staff. By early 1976, more than 200 families had chosen to settle in Tin Aicha, 100 sandy kilometers and four hours by Landrover from Goundam.

Since the beginning of the project, Tin Aicha has grown in population and prosperity. Livestock herding combined with lakeshore agriculture is the base of the village economy. By 1981, the village had over 1,000 citizens, a primary school, a weekly market, a cooperative store, a mosque, a health clinic, and a viable village government. This report details some of the aspects of the AFSC's involvement in the project and attempts to assess the lessons of the endeavor as an aid to AFSC planners and others.

The village school began in 1975 with one grade and seventy-three pupils; in 1979, it had six grades with 189 students. Village government was established with elections in April 1975, and the village in 1981 was on the verge of recognition as a political entity.[1] People who knew nothing of agriculture in 1975 grew enough grain in 1979 to feed themselves for half the following year. And from a deep suspicion of modern medicine, a basic trust of the village dispensary has emerged.

In 1976, a weekly market was suggested, and, by 1978, some of the most important merchants in the Lake Faguibine area were setting up shop there. A cooperative store, selling staples at low prices and returning the profits to the villagers, was opened in 1975 and became a Government-recognized cooperative in 1978. Permanent buildings for the cooperative, the school, and the dispensary were all completed by early 1980, visible proof of the permanence and stability of Tin Aicha.

---

1. Official recognition came in October 1981.

ii The previous numbered page in the original document was blank.

Map 1
MAP OF AFRICA

The previous numbered page in the original document was blank

17

12

BEST COPY AVAILABLE

Photograph by R. Todd Hoffman

BEST COPY AVAILABLE The previous numbered page in the original document was blank

1. INTRODUCTION

Nomads and the Sahel

The Sahel is a 3,000-mile strip of semiarid land in West Africa between the Sahara and the fertile savanna to the south. The word "Sahel" is Arabic for "shore" and refers to the edge of the Sahara "ocean." The Sahel stretches through six Francophone countries in West Africa: Senegal, Mauritania, Mali, Upper Volta, Niger, and Chad. Its inhabitants are mainly nomadic or seminomadic, although many are also sedentary farmers who trade their grain for nomad livestock. The annual 50-150 millimeters of rainfall allows the survival of certain hardy breeds of grasses and small trees, which provide forage for the herds. During the cold months of December through February, temperatures can drop to 0°C (32°F); during the hot, dry spring, temperatures reach 47°C (115°F). The rainy season lasts from June to September and brings high winds and violent storms.

The Republic of Mali is a Sahelian country located in the interior of West Africa. It is about 478,000 square miles in size (1,240,000 square kilometers) and has a population of about 5.7 million. Its topography includes savanna, the Sahel, and the Sahara. The region was conquered by the French in the 1890s and became that part of French West Africa known as the French Sudan. Mali became independent in 1960 and is currently governed under a one-party democratic system. The country is bordered by Mauritania, Senegal, Guinea, Ivory Coast, Upper Volta, Niger, and Algeria, and has no outlet to the sea.

The Kel Tamashek are the most widely known of the nomads in Mali; the most numerous are the Fulani, although many Fulani are seminomadic. All the nomads share a culture and economy based on herding. Their animals turn a sparse, marginal environment into a productive region that has supported nomadic herders for nearly 6,000 years. Status, nutrition, mobility, and wealth all depend on the possession of animals—camels, cattle, sheep, goats, donkeys—and their care.

Within the traditional society of the Tamashek are five distinct classes: nobles, vassals, *marabouts* (Islamic religious teachers), artisans, and servants. (The servants — Iklan, or Bella —legally ceased to be slaves many years ago but their position in

The previous numbered page in the original document was blank

nomad society remains one of subservience.) Occupations, social and religious ritual, and kinship patterns vary, but on the whole the nomad groups adapt to their environment in quite similar fashion.

Although the nomads' pride and livelihood rely upon the ability to travel with their herds, it is not unusual for some to spend several months in one village or to leave some members of the family in one place, with a few animals, while the rest of the family travels with the main herd to richer pastures. Among some nomad groups, the higher classes in the society travel with the herds, and the lower classes remain behind, farming land that is owned by the upper classes.

Most nomad groups circulate in a large "home" area, breaking camp before dawn, and traveling before the heat of noon. During the wet season, they move frequently; during the dry season, they camp near a well for as long as the pasture holds out—usually a matter of weeks. As the dry season progresses, they move from shallow, hand-dug wells to deeper wells. The distance between the camp and a well or water source is limited to about ten kilometers because small livestock must be watered every day; the distance between the camp and the pasture is limited to about twenty kilometers because the cows must return to the camp every day to be milked and to feed their calves.

At the onset of the wet season, many nomads round up their animals to begin the month-long journey north to the edge of the Sahara—the salt earth, as the Tamashek call it. Here the animals can graze on salt grasses and drink water high in minerals, both of which are considered healthy for animals and the humans who consume their milk. Also, since tribes tend to meet repeatedly in the same general areas every year, it is a time of celebration, with feasting, camel racing, wrestling matches, and courtship.

Material goods, which must be light and durable, are limited to household necessities. They are therefore usually made of wood, and wood is the major nonfood resource drawn from the environment. Aesthetic taste and material prosperity tend to be expressed by intricate decoration of functional items such as carved tent poles, bowls, and beds, woven mats, knives, and swords, rather than by the addition of superfluous goods.

The tents are heavy and strong to withstand the high winds and driving rains of the wet season. During the dry season, straw huts, which are better protection from the heat than dark-colored tents, are generally built or rebuilt; tents are stretched,

waterproofed, and mended. During cool, dry periods, the nomads camp near small trees and bushes which provide fodder for their goats. During the wet season, the tents are pitched on top of high dunes to avoid mosquitoes and water runoff; the hot, dry season also finds the nomads on top of high dunes to catch the breezes.

Animals, as stated, form the core of nomad life, and a nomad's care and understanding of his herds is the key to his success. Cattle provide milk for souring, butter, and cheese; their hides are used for tents and sandals; and they are sold for large purchases. Sheep are slaughtered for sacrifice or celebration, they provide milk and butter, and they may be sold for small items. Their hides are made into pouches and wallets. Goats also provide milk and cheese and are sold to buy tea, sugar, tobacco, salt, and other small necessities; their leather is used to make water bags, milk churns, and cushions. Donkeys are used chiefly for transport, although their milk may be used for medical purposes. Horses are symbols of very high status and are generally reserved for respected elders. Dogs are kept for guarding the camp and the herds, and for hunting; they are rarely sold but often given as gifts. Camels transport the heaviest materials —tents, people, sacks of grain, slabs of salt. They provide fresh milk and are very rarely slaughtered. A large herd connotes wealth, but a large herd of camels is a special sign of prestige.

The diet revolves primarily around milk and milk products. It is supplemented by wild and domestic grains, stored in sacks, in brick granaries in the towns, and in secret caches in the sand where it is said to remain edible for two to three years. Animals are not regularly killed for meat, which is eaten only on special occasions (guests, for example, may have a goat or sheep slaughtered in their honor) or in times of dire need.

There is a tendency in the West to regard nomadism as a throwback to humankind's primitive past, before the discovery of agriculture gave rise to sedentary civilizations. In the Sahel, however, nomadism is still the most efficient means known to date for exploiting this extremely marginal terrain. It should be viewed as a rational response to environmental circumstances and not as a refusal to progress to a settled lifestyle. Throughout their long history, the nomads have had a proud, generous, independent spirit and a cultural identity as extensive as that of any sedentary society. For reasons which this report explores, the events leading to the drought of 1968-1974, and the drought itself, threatened this heritage and the nomads' very survival.

Drought, Famine, and Relief

Droughts have long been a fact of life for the sub-Saharan regions of West Africa. Poor harvests and acute famine were recorded in the Sahel from 1910 to 1914, and again in 1941-42. The conditions from 1968 to 1974, however, were without recorded precedent in the Sahelian countries of Senegal, Mali, Mauritania, Chad, Upper Volta, and Niger. By mid-1972, the death toll for the nomads of the sub-Sahara had reached tens of thousands. Herds were so devastated that two million pastoral people had no means of subsistence. The social fabric of the family and clan in many cases was torn completely apart. The Sahelian nations, which had been slowly working toward economic independence after decades of colonial rule, saw their efforts destroyed in the space of three years as they once again became dependent upon other nations.

Both natural and human elements contributed to the disaster. By 1968, changes in climate had dramatically reduced water supplies and had caused crop failures to the point that emergency measures were required to meet food needs. This, and the relentless encroachment of the Sahara wasteland southward, portended disaster. Yet most people ignored or dismissed these signs as temporary aberrations or cyclical phenomena.

The potential consequences of certain human activities similarly were ignored. Decisions to raise cash crops for export ultimately affected the entire ecological balance of the region. The most fertile land, formerly used to grow staple foods for internal consumption, increasingly was used to grow cash and export crops—peanuts, for example.

Further, the cash crops were produced in irrigated belts which traversed the nomads' traditional north-south migration routes, and the farmers prevented or limited access to the nomads' hardier dry-season pastures. As farms encroached northward, the nomads who raised the nation's livestock were pushed even further north toward the desert. Many herders found it necessary to spend the entire year on marginal pastures which previously had been reserved for wet-season use. The rational, traditional balance between sedentary farmers and nomadic herders thus was disrupted.

Another factor in the disaster of the 1970s was that increased rains in the early 1960s had caused improved health among humans and livestock, as had modern medicine and immunizations. The inevitable growth in human and animal populations created an increased demand for resources, and insufficient at-

tention was given to the livestock carrying capacity of any given area. Herds were augmented without safeguards against overgrazing, and large areas were stripped of protective vegetation. Foreign assistance programs further aggravated the overuse of marginal lands by funding the drilling of new wells, which lowered the water tables and caused the land around the wells to be completely denuded, as grazing herds, seeking water, traversed it again and again.

The response to the drought by local governments and international relief organizations fell far short of the need. One report stated, "The people of the Sahel faced a deepening crisis of drought and hunger from 1968 until the spring of 1973 almost entirely without the help or attention which might have alleviated the disaster."[1] Many survived the famine only to face despair, disease, and a still-uncertain food supply in squalid refugee camps and settlements across the six countries.

Neither the Governmental nor United Nations' (U.N.) organizations took adequate action to assess and meet the needs resulting from the disaster. The African bureaucracies were severely limited in technical resources and data about the rural areas and found themselves ill equipped to recognize or cope with the problems of the drought, despite many indications of good will. The limited transport capabilities of the Sahelian countries, combined with partisan interests, further complicated efforts to reach those who were most in need. The drought also revealed serious flaws in the response of the international community to disasters: rivalries, failures to use available information, and poor planning.

The drought of 1968-1974 will not be the last drought in the Sahel. The future of millions of Sahelian people may well be determined by the way the Governments of the Sahel and the international community deal with the issues raised by this drought, and by the way they evaluate and apply the lessons it exposed. In 1975, the heads of state of countries affected by the drought organized the International Committee Against Drought in the Sahel (CILSS) in an effort to coordinate aid and development efforts from donor countries. This has increased regional cooperation and so provided a mechanism that could keep the next drought from causing a full scale famine.

---

1. Hal Sheets and Roger Morris, *Disaster in the Desert,* Humanitarian Policy Studies (Washington: Carnegie Endowment for International Peace, 1974) p. 10.

AFSC Experience in West Africa

When the American Friends Service Committee decided to respond to the Sahelian drought, it already had some familiarity with the region and its concerns, its people, and its leaders. AFSC program involvement in West Africa included an international dialogues (seminar) program, relief and rehabilitation work in Nigeria/Biafra, and a maternal and child health and population-education program that involved a number of countries in the region.

The West African International Dialogues Program, begun in 1963 and based in Togo, provided an opportunity for the study of African issues from an African perspective. In residential off-the-record seminars which brought together young professionals from Anglophone and Francophone countries, the program promoted greater understanding of each country's needs and aspirations and enabled participants to reflect upon possible indigenous solutions. The program also undertook to provide encouragement to those seeking social change and development in the face of enormous social and economic odds.

To help dissipate the political and cultural barriers which separate Africans, and to provide a cross section of perspectives on mutual concerns, participants in the International Dialogues Program were drawn from many countries, ethnic groups, and walks of life—government, universities, business. Seminars dealt with subjects such as: "African National and Cultural Questions Which Affect the Processes of Self-Determination"; "The Role of Youth"; "The Africanization of Education"; and "Processes of Development." Some 650 Africans participated in the program during its fourteen years, with an average of twenty-five taking part in each seminar.

During the Nigerian civil war, AFSC field staff gave nutritional and medical assistance to civilian victims on both sides of the conflict, with the full knowledge of both Governments. After the fighting, the AFSC turned its attention to tasks of post-war reconstruction: reestablishment of health services, including training in midwifery, community nursing, and physical therapy; work in the field of nutrition; the return of unaccompanied children to their families; restoration of basic agricultural and fishing enterprises; restoration of public facilities and housing and implementation of vocational training programs.

Representatives of the AFSC family-health and population-education program made field visits to Ghana, Ivory Coast, Nigeria, Senegal, Togo, and Upper Volta in 1966, 1967, and 1968.

During 1969-1970, the Togolese minister of health invited the AFSC to help organize, conduct, and finance a series of nine one-week training courses for 270 auxiliary midwives who were providing maternal and child health services in rural areas. In order to improve the quality of on-the-job supervision available to the auxiliary midwives, two special training courses were also held for supervising midwives.

An outgrowth of this effort was a two-year AFSC-sponsored population-education program, based in Dakar. The AFSC representative served as a consultant in four countries—Benin, Mali, Senegal, and Upper Volta—all of which were developing programs relating to public health and family planning. Other activities included the organization of a West African seminar on family life and sex education, distribution of French-language training materials to educational and health institutions, and support of locally-sponsored development programs.

20

Photograph by R. Todd Hoffman

21

The previous numbered page in the original document was blank.

BEST COPY AVAILABLE

THE CERCLES OF THE NIGER BEND

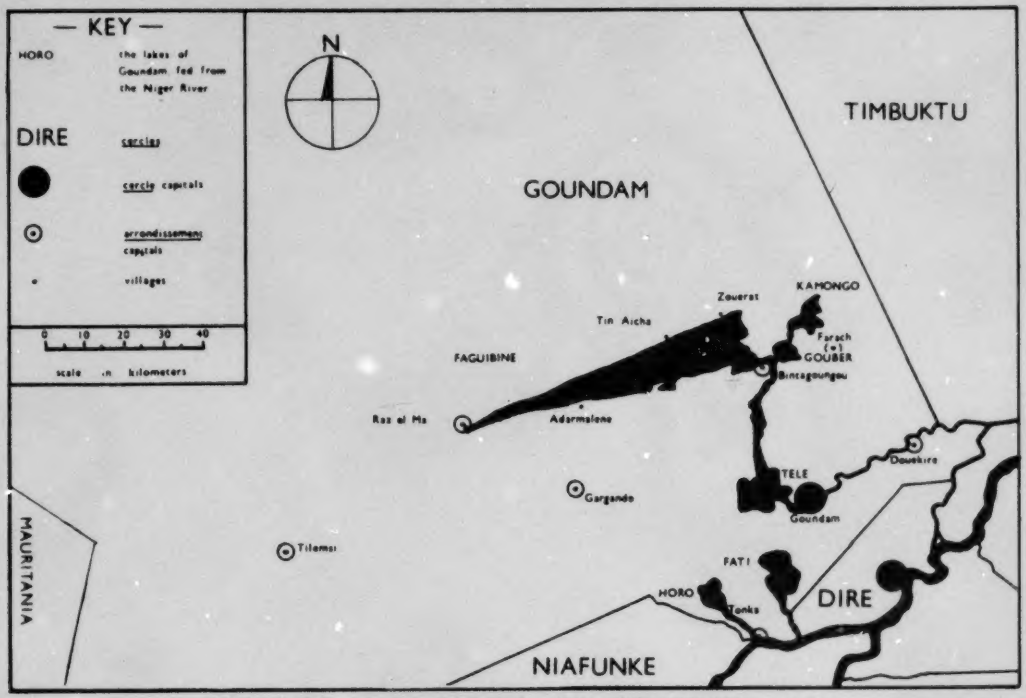
Map 2
THE *CERCLES* OF THE NIGER BEND

The previous numbered page in the original document was blank.

BEST COPY AVAILABLE

BEST COPY AVAILABLE

Map 3
PART OF THE CERCLE OF GOUNDAM



PART OF THE CERCLE OF GOUNDAM

2. AFSC PROJECT EXPLORATION

When AFSC supporters and contributors began to voice their concern about the drought and famine in the Sahel, the AFSC had already begun research on the situation. Staff of the AFSC in West Africa had kept the Philadelphia Office informed about the drought since 1972, and a decision was made in 1974 to explore the needs and program possibilities in the countries most affected.

Traditionally, the AFSC has directed its relief and rehabilitation work to disasters caused by human beings in conflict: wars, civil strife, and confrontations where there is a need for reconciliation. The AFSC is, of course, concerned with the natural disasters that afflict humanity—droughts, earthquakes, floods—but generally prefers to channel its contributions for emergency relief to other organizations which specialize in such work.

It was clear that the disaster in the Sahel was in part the result of misguided development efforts, and that the famine was causing population shifts which created tensions and conflicts between nomadic people and settled, agricultural people. As well as the need for relief, then, there were nonrelief aspects of the crisis to which the AFSC might respond.

Mali was chosen as the country of initial exploration for a number of reasons. Sixteen Malians were alumni of the West African International Dialogues Programs; two AFSC seminars on population and sex education had been held in Bamako, the capital; and several Malians, including the minister of production, continued contact with the AFSC.

Mali was attempting to cope with the crisis with a minimum of reliance on outside organizations. The AFSC respected this position and by supporting it hoped to awaken people in the U.S. to the dilemma faced by developing nations which accept massive outside aid—aid which may be necessary to the immediate survival of many people, but that will inevitably increase the developing nation's dependence on other wealthier nations. The drought had led some Malian leaders to reconsider their view of outside assistance, and the country as a whole seemed ready to explore new alternatives. The AFSC saw an opportunity to contribute to Mali's development goals without

weakening Malian independence and initiative.

Field Visit, 1973

In the spring of 1973, the AFSC consulted with George Povey, M.D., of the University of British Columbia, who had just returned from Mali where he had worked with a Canadian organization. He was well known to the AFSC as an epidemiologist and an expert on maternal and child health care. In response to his firsthand report of the situation, the AFSC offered to help meet the request of the Malian Ministry of Health for medicines for drought victims in the northeastern Provinces of Mopti and Gao. George Povey returned to Mali in June and July 1973 to deliver on the AFSC's behalf a shipment of ampicillin to deal with gastroenteritis, meningitis, cholera, and other bacterial infections. He distributed a large portion of these drugs directly to nursing assistants at local dispensaries in the Province of Mopti. The remaining drugs were distributed by the Ministry of Health.

George Povey subsequently reported that large amounts of food would have to be imported for another year in order to avoid mass starvation. Improvements in health and sanitary conditions were also crucial. Nomads who were unable to resume their former way of life might have to be integrated into agricultural or urban societies, and this would not be easy. Regional cooperation to solve some of these problems was essential. The AFSC, although unable to respond with massive amounts of food or medicine, was willing to explore ways to respond to the social disruption that had occurred as a result of the drought.

Most of the nomads had lost most of their livestock and were living in Government camps subsisting on grain which was airlifted and trucked into their areas. Even if the rains were good—and this was unlikely—there would be no way for the nomads to return to herding in 1973.

It seemed appropriate for the AFSC to explore ways to reintegrate drought victims into productive society. The AFSC, recognizing the complexity of the problem and the fact that there were no easy solutions, asked George Povey to return to Mali to undertake further program exploration.

Before his return, AFSC committee and staff members developed criteria for a program which would be consistent with general AFSC principles and guidelines. The target group was defined as drought victims, particularly those beyond the reach of the usual Government services. The project was to help

people become economically self-supporting. The target area was Mali's Sixth Region, the northern area of the country and the most severely hit by the drought. The project would ideally be experimental and have the potential for a significant multiplier effect. The AFSC was willing to consider a single self-contained project or one component of a larger program, if the component was discrete and identifiable.

Field Visit, June 1974

On his second AFSC visit to Bamako, George Povey contacted the Ministry of Production, whose staff expressed a keen interest in the possibility of an AFSC project. The ministry arranged meetings with members of other national departments and facilitated exploratory field trips. The minister of health also offered his full cooperation. George Povey found that officials at all levels were deeply concerned about the problems resulting from the drought and eager to present their ideas and discuss possible solutions.

The director of the National Livestock Service and others in the Ministry of Production outlined a series of projects to be situated in various areas. Their proposals included improved water sources; grazing control; modernization of animal breeding, feeding, and marketing practices; vaccination and antiparasitic programs; provision of credit to those who wanted to reestablish herds or businesses; and social programs in literacy, health care, and crafts production. While these proposals required investments of time and money far too extensive for the AFSC to consider, George Povey hoped to identify a short-term, limited pilot project that could test the feasibility of larger undertakings.

Accompanied by several professionals from the national and local livestock and veterinary services, George Povey visited the Sixth Region. His visit included the towns of Gao, Menaka, Anderamboukane, In Tellit, Hombori, Bambara-Maounde, Dire, and Goundam. The team saw refugee camps and food distribution centers for refugees. Language barriers made it difficult to explore in depth the needs of the nomad drought victims; but it was clear that their most urgent desire was to return to nomadic herding, although they recognized the danger of a renewed cycle of overgrazing and disaster.

Their fears were well founded. There was indeed evidence of overgrazing, deforestation, and wind erosion everywhere. Herds that had survived the drought were moving northward as the rains began, and the most abundant animal was the goat. Goats

had survived the drought better than cattle or sheep, so nomad herders now considered them the best investment. Most Malian officials, however, said that goats were an environmental menace because they ate leaves from the few trees in the otherwise barren land. No one knew what to do about the goats; the lives of too many people depended on them.

While in the town of Goundam, George Povey visited a refugee camp which prior to his arrival had housed 5,000 sedentary farmers and nomadic herders severely afflicted by the drought. The farmers had been transported home and provided with enough seed and provisions to last until their first harvest. Some of the nomads had been able to procure animals and had left, and some had moved on to seek work or relatives who might be able to help them. The 3,000 remaining refugees in the camp were the most destitute and hopeless of the original population.

The *commandant de cercle* of Goundam (administrative officer of the Goundam District), whom George Povey had met the previous year in another region, was encouraged by an experiment in potato farming in the dry channel bottoms around the refugee camp. The *commandant* believed that the nomads, desperate to regain their independence, would be willing to try farming as a vocation. He had selected 100 volunteer nomad families (just over 500 people) to farm approximately 100 hectares (247 acres) on the north shore of Lake Faguibine and had requested his regional government, at Gao, to provide gasoline to transport them and seed to let them begin farming.

These families were volunteers only insofar as they had taken what seemed to be their only option for survival outside the camp. The potential settlers had no common ties, no established pattern of working and living together, and no communal vision of the future. Islamic religious belief was perhaps their only common bond.

Discussions were held among the *commandant*, George Povey, the team that had accompanied him, and staff of the National Livestock Service and other ministries in Bamako. These meetings led to an amendment of the *commandant's* original plan so that it would be more in accordance with the culture and traditional economy of the nomads; a model was designed that would integrate farming with livestock raising and include elements such as education and health care to help the nomads adapt to a changing world.

Project Assessment, Comparison, and Decision

The project as planned was particularly suited to the AFSC's

participation for several reasons. It required fast action to take advantage of that year's rains; it concerned a limited number of persons; it offered possible long-term solutions; it could be closely monitored; and the financial and time commitments were relatively modest.

Two other projects had been offered for the AFSC's consideration at this time. One was an experiment in grazing control, and the other a project to restore drought-stricken *bourgou* zones, areas of the Niger's inland delta which produce this rich source of forage and human food. Each was seen as suitable for rehabilitation of the environment, but neither would relieve the urgent and immediate needs of the drought victims.

Although guidelines were being established for the project, the many possible ways in which an AFSC representative could interact with Malian officials and with the drought victims only would become clear as the project evolved. This was not to be an AFSC project in the usual sense, but a Malian project, conceived of and managed by Malians. The AFSC was being invited to provide funds and advice, but all decisions would be Malian decisions. It was only on these terms that Malian authorities would accept outside assistance; the AFSC was enthusiastic about this arrangement.

The International Division Executive Committee and the Board of Directors of the AFSC approved the project in principle, subject to a firm invitation from the Malian Government. George Povey returned once more to Mali in September 1974 to present the AFSC offer of assistance in person and to determine whether or not the project had formal Government approval. At a meeting with Government officials in Bamako, it was decided that George Povey would visit the project site, and that the matter would be reconsidered when he returned. He spent four days in Goundam. The drought victims remaining in the Goundam camp now numbered 2,627. He spent one day circling Lake Faguibine by Landrover, accompanied by the medical director of the Sixth Region (an alumnus of the International Dialogues Program).

The *commandant*, with no news from Bamako on his proposed project, had gone ahead with his plan and had transported 102 nomad families to the north shore of Lake Faguibine. The site of the new settlement was called Tin Aicha.

The colonists at Tin Aicha were camped on a sandy flat near the lake in tents made of mats and skins brought from Goundam. They had dug a hole in the middle of the village for drink-

ing water. There remained a supply of the relief foods which they had brought, and, in return for helping local Bozo fishermen haul in nets, they received fish to eat (a new food, not much appreciated). The gently sloping lakeshore had already been planted in places by others already in the area with small plots of beans and sweet potatoes and larger plots of rice.

Health conditions in the community were poor; respiratory infections and diarrhea were common. A single soldier was assigned to the group as a peace officer. An informal village chief had been appointed by the authorities, a Tamashek, who spoke French and Arabic as well as his own language, and who formerly had had the role of mediator between nomads in the refugee camps.

Returning to Bamako on September 15, George Povey was joined by Annelies Allain, AFSC International Dialogues Program staff person in Togo. With representatives from the National Livestock Service, they developed a new project outline based on the field visit and on consultation with local authorities, various people in the Ministries of Production, Defense (which carried administrative responsibility for the Sixth Region), and Health, and interested persons in United Nations, governmental, and nongovernmental organizations. There was consensus that this project outline would help in making later decisions concerning a possible national recovery program.

Outline of the Malian National Recovery Plan

The national five-year program, still in draft stage, for the rehabilitation and development of herding and agricultural peoples was a massive and ambitious project designed to help 180,000 refugees. Millions of dollars were involved. Its long-term objectives were to resettle the refugees remaining in the camps of the Sixth Region and to renew agricultural and pastoral activities in the Sahelian zone. The plan would stock food reserves; supply the logistics to help distribute goods and services; create hospitals, dispensaries, nutrition centers, grain supply centers, and veterinary centers; and undertake massive reforestation efforts. The plan would reconstitute the herds of 10,400 nomad families. The role envisioned for the nomads would either be herding, herding combined with farming, or some form of commerce.

The means for such a major rehabilitation program had not been developed. Suggestions for ways that nomads could fit into this development were limited. Few planned sedentarization efforts by the Governments had ever succeeded in the Sahel, and

experience showed that Governments had great difficulty coercing people into a lifestyle they did not desire.

In this context, the Tin Aicha Project appealed to the AFSC as a way to learn which directions nomads might take when offered a variety of options. As the project progressed, the less-preferred options could be eliminated, allowing additional experimentation. Some Government officials viewed Tin Aicha as a pilot project. Final project approval for Tin Aicha was therefore expected, but it was not granted. The Malian Government felt that starting any individual project was unwise before a national policy for dealing with the drought victims was fully formulated. What seemed like an abrupt negative decision after the relatively long period of encouraging project negotiation was a surprise and a disappointment for the AFSC.

Then, in October 1974, the AFSC received a letter from the minister of production inviting the AFSC to provide assistance in settling drought victim families on Lake Faguibine. This sudden change by the Malian Government might be attributed to several factors but should be credited in large part to the advocacy and persistence of the minister of production. He argued that the project would be useful to test some aspects of the national plan before it was fully implemented. He was impressed by the integrity and concern of the AFSC staff he had met and by the objectives of the AFSC. Both the AFSC and the Government now were ready to implement the Tin Aicha Project.

3. PROJECT PLANNING AND DEFINITION

Philadelphia AFSC staff member Susan Smith Gunn went to Bamako in December 1974 to continue the program planning started by George Povey. Her tasks were to complete arrangements with the Government, to provide funds for the implementation of the project, and to participate in detailed planning sessions at the national level. She subsequently visited the project site to observe the first stages of the project and to investigate the role of the AFSC representative. Eva Mysliwiec was appointed official AFSC representative for the Tin Aicha Project and joined Susan Smith Gunn in Mali in February 1975.

The AFSC has been fortunate to obtain the services of three excellent staff between 1974 and 1981. Susan Smith Gunn had previous experience with nomads in Menaka, in Mali's Sixth Region. Eva Mysliwiec had worked with the Peace Corps in Upper Volta as a health coordinator and was well grounded in sociology, community development, and nutrition. Stephen Morrissey, Eva Mysliwiec's successor at Tin Aicha, was an experienced Africanist who had spent two years in the Cameroons and had earned an M.A. in African history.

Susan Smith Gunn and Eva Mysliwiec discussed sedentarization, nomad culture, project administration, and other aspects of the project with Malians involved in the project. Although nomad sedentarization was a popular concept among Malian Government officials, those with whom the AFSC dealt were open to supporting whatever way of life the nomads found most viable. It was noted in these discussions that only people who could move with their herds could fully exploit the food potential of the Sahel and the Sahara.

Nomads who could reestablish their own herds generally were not interested in settlement. It is misleading, however, to refer to nomadism and sedentarism as mutually exclusive. There are relatively few pure nomads; sometimes members of a family move while others remain at a home base, and sometimes a whole family will move during part of the year and stay in one place for the rest.

Although it was clear that the Malian Government based its criteria for project success on whether or not the people would

31 The previous numbered page in the original document was blank

remain settled, the AFSC was equally clear about its own criteria: the restoration of self-sufficiency and dignity, the acquisition of new skills, and improvements in health and education. These would stay with the nomads whether or not they chose to remain settled.

At the suggestion of the minister of production, an Interministerial Committee was formed for the Tin Aicha Project. The Interministerial Committee brought all the relevant ministries into the planning process and through regular meetings during the project's first four years they were kept informed of its progress. The Interministerial Committee made all major decisions; the *commandant de cercle* of Goundam, Captain Kibily Demba Diallo, was designated project leader and was responsible to the Interministerial Committee.

At a meeting in February 1975, Eva Mysliwiec and Susan Smith Gunn heard a report by the *commandant* and the ministries providing services to Tin Aicha. There had been progress since George Povey's 1974 visit. Government departments had provided resident and part-time personnel. Periodically, supplies had been brought in, and crops had been harvested. Tents and straw huts were serving as shelters.

The nurse had a simple but complete stock of medicines and equipment with which to work, ordered by the chief doctor of the Goundam District. Unfortunately the nurse was not fluent in Arabic or Tamashek, and the *commandant* requested that he be replaced as soon as possible with someone who was in order to inspire more confidence among a people not used to modern medicine.

A social worker, in consideration of the rigors of the environment and the distance from home, was assigned to Tin Aicha only for a three-month shift. Past experience in the refugee camps and an ability to speak Arabic or Tamashek were criteria for selection.

Both the agricultural and the veterinary technicians were assigned to Tin Aicha on a part-time basis. Although they had responsibilities elsewhere in the Goundam area, they visited the site at least once a week and more often if necessary. The aim of both was to help the community become self-sufficient in food and then to produce a surplus which could be marketed to meet their additional needs.

Budget and Finances

The financial arrangements developed in the Government-AFSC agreement expressed concretely that this was a Malian

project. The AFSC would allocate money to a fund administered by the Interministerial Committee to cover project expenses. This giving up of direct responsibility for project expenditures was unusual for the AFSC and affirmed a willingness to support the concept of Malian control.

The AFSC was to contribute:

—the services of an expatriate community development worker;
—sorghum, rice, and vegetable seed;
—livestock;
—medicines for the Tin Aicha clinic;
—educational materials for the school;
—salary supplements for indigenous project personnel;
—a vehicle and vehicle maintenance.

The Malian Government was to provide:

—services of the project director;
—services of an agricultural technician;
—part-time services of a veterinary expert, and medicines;
—services of two teachers, and a school building;
—services of a nurse, and a clinic;
—services of a social worker;
—housing for project personnel;
—customs exemptions for the AFSC, which would be importing substantial amounts of materials.

The AFSC agreed to provide $60,000 a year for three years to a Tin Aicha Project fund held in a Bamako bank. Each year a budget was to be drawn up by the Interministerial Committee to serve as the basis for expenditures. The AFSC representative transferred money into the account quarterly. Initially, withdrawals required two signatures, the designated representatives of the minister of production and of the AFSC. This was later changed, eliminating the AFSC representative's signature. Accounts on the use of the fund were submitted to the AFSC by the Office of the Minister of Production each quarter. On the basis of these accounts, the next transfer was made. After two years, it became evident that most expenditures for Tin Aicha were made in Goundam, rather than in faraway Bamako. Therefore it was suggested by the minister of production that AFSC make payments directly rather than through the project account in the Bamako bank. The Interministerial Committee, however, retained the role of determining the budget and setting the priorities for the fiscal year of the fund.

Throughout the project, AFSC paid some costs which were not

covered by the Tin Aicha fund, such as the salary for the social worker, which was later covered by the Ministry of Social Welfare.

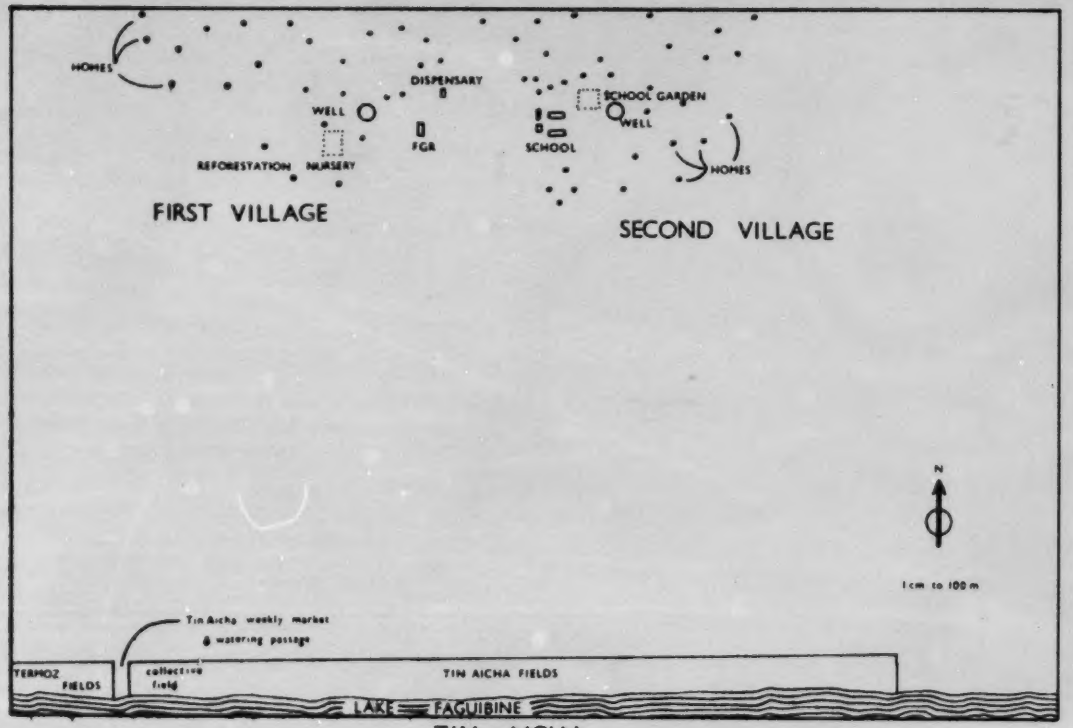
After the three-year Tin Aicha agreement was completed, the AFSC was asked to remain until the final phase of the work was completed. Funding for the work was paid directly by the AFSC representative, notably the construction costs of the permanent buildings at Tin Aicha.

The Malian Government and the AFSC attempted to keep project costs at a modest level so that when the AFSC departed the project would be self-sufficient and free of dependence on outside funding.

The following table shows the budget as presented at the February 1975 Interministerial Committee meeting.

Table I
1975 BUDGET (Malian Francs 475 equals U.S. $1)

	1st Trimester	2nd Trimester	3rd Trimester	4th Trimester
Livestock	7,085,000 ($14,916)	7,046,000 ($14,834)		
Landrover	4,650,500 ($9,791)			
Gas-Maintenance	900,000 ($1,895)	900,000	900,000	900,000
Education	1,900,000 ($4,000)	200,000 ($421)		
Medicine	500,000 ($1,053)	500,000	500,000	250,000 ($526)
Indemnities	30,000 ($63)	30,000	30,000	30,000
Seeds	500,000 ($1,053)	600,000 ($1,263)		



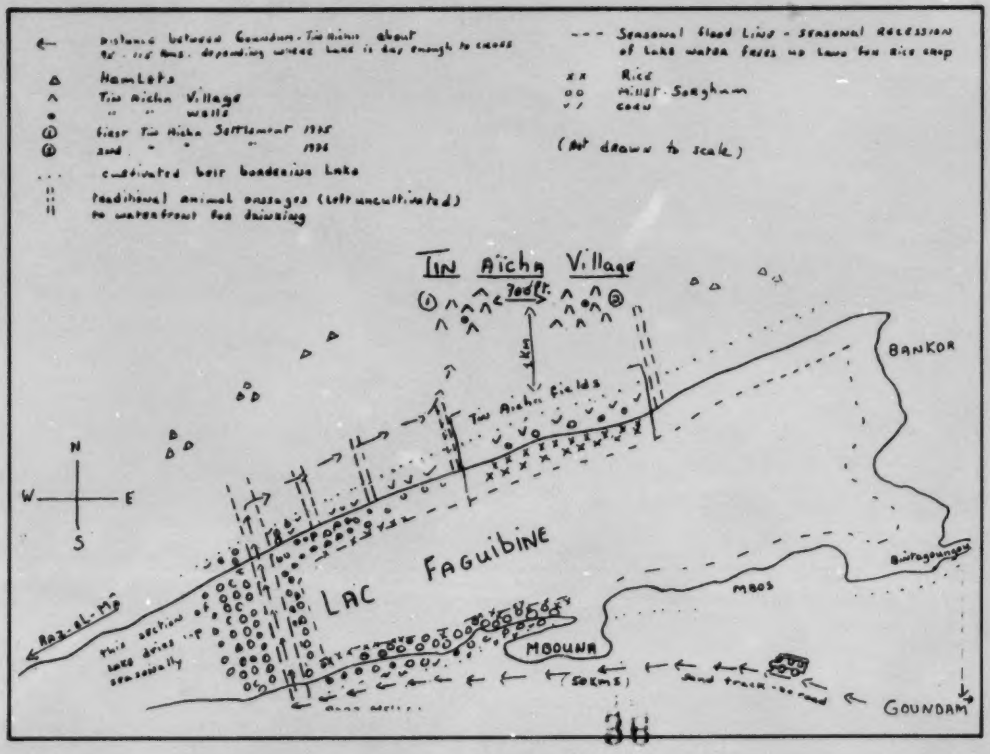
Map 4
TIN AICHA

BEST COPY AVAILABLE

45

BEST COPY AVAILABLE

Map 5
TIN AICHA AND LAKE FAGUIBINE



Photograph by R. Todd Hoffman

BEST COPY AVAILABLE

47

Photograph by R. Todd Hoffman

38

The previous numbered page in the original document was blank. 49

BEST COPY AVAILABLE

4. PROJECT REVIEW

Introduction

The following Project Review details some of the accomplishments and failings of what were the most important aspects of an extensive project. A project of this scope and duration has myriad facets and has affected too many people in too many ways to be recounted fully in a single report. Also, while some aspects of the project fall neatly under a particular heading, others are less categorical. The village wells, for example, affect health, livestock, gardens and trees, the social life of the village, and even attendance at the village weekly market. Nevertheless, the Project Review hopes to present the story of Tin Aicha with clarity and fairness and to describe, in a brief yet complete form, the areas in which the AFSC involvement has had the greatest impact upon the lives of the Tin Aichan villagers. The order of the subjects does not specifically reflect the importance nor does it describe the actual chronological sequence of events.

***

When Eva Mysliwiec arrived on the edge of Lake Faguibine in February 1975, there were no signs of the freedom, the self-reliance, and the sharing that once had characterized nomad people. The settlers camped on a sandy flat near the lake in the skin and mat tents they had brought with them from Goundam.

After six years of struggling to survive, and then a year of dependence on Government grain and supplies, these settlers were physically, psychologically, socially, and morally debilitated. The greatest challenge to Tin Aicha would be to restore a sense of dignity and culture to the settlers.

Profiles of Seven Tin Aicha Family Heads[1]

The Tin Aicha settlers were a highly diverse group, yet their profiles dramatically illustrate their extremely arduous lives and the forces that propelled them to settle at Tin Aicha. Woven in their stories, too, is a continuous thread of common values

1. Stephen Morrissey recorded and translated these personal experiences in January 1980. Family members listed are those who live in Tin Aicha.

The previous numbered page in the original document was blank.

BEST COPY AVAILABLE

and cultural patterns. What follows is their life before Tin Aicha. The Assessment and Conclusions chapter of this report is their commentary after joining the project.

Man
Age: 69
Previous Home: Timbuktu/Ber
Family: wife (died 1979, age 41), sons (36, 21, 4), nephew (22)
Kel Antessar Group

I was born in the far north of Timbuktu, in the area of the deep wells, in the *fraction* Alhadj Billal. I am the youngest of nine children, and I am the only one left. We herded sheep, cows, and camels. The encampment had many tents. We were also a warrior group—we defended the wells against the desert bandits—and so the encampment was very large and well armed. I went to Koranic school in the encampment. I was supposed to go on to a larger school after having finished reading the Koran, but in the end I never finished the Koran because there was herding to do and the bandits disturbed things, and then I had my mother to take care of because my father died. I married in the year when the French defeated the bandits at Tin Aicha (1923). My wife was a cousin, chosen by my mother. We had three sons and four daughters who are still alive; five others died. We stayed at the family encampment, and I took the camels on the salt caravan to Taodenit. I continued with the salt to Hombori and into Upper Volta, but it wasn't Upper Volta then, it was part of Mali. Going north, I was with a group of Moors, but going south to sell the salt, I went with relatives. Our relations with the Moors were very good. It is like that with all the people of the East. It's not like the Moors and the Tamashek here who are cat and dog. My wife died and I married again in 1958. We had five children, but four died. My wife died in 1979. I'd like to marry again, but I have nothing. I should have a family so that I can receive visitors. I continued in the salt trade until 1961; then my brothers continued but I left it because I was named counselor of our *fraction*. I was the liaison with the administration; I protected the interests of the *fraction* but was just and did not force people. I collected taxes and did other jobs for the Government. There were problems with the *fraction* chiefs, who always tried to take a cut of the taxes, but I usually managed to avoid that. I worked with the *chef d'arrondissement* of Ber. I was a counselor until 1973, when I had to leave the area

because of the drought. Until then I remained in the family encampment. Life was very good before the drought. In 1973, there was a rain in June, but not enough to bring the animals out of the dry season. Then there were more rains and some grass, but the animals died as they ate, because they were famished due to the lack of rain in 1972. I lost many. Then many animals came from the Region of Gao, where it hadn't rained at all, and ruined the pasturelands. So there was famine again. People ate nothing but meat. In the dry season of 1974, all of the animals died, and even those few which were left were slaughtered for their meat. I realized the problem; I was not like those who preferred to stay and die in the area. I knew that I had to find a better place. I convinced as many as possible to go with me. My brother took the rest to the northern well, but most of them died there. I took my group to Timbuktu first, although we didn't even know if most of them could make it that far. We found nothing. There were already many poor people there; all of the possibilities had already been exploited. Then we heard that there were still possibilites in the *cercle* of Goundam, especially at Tonka. I went by myself to Lake Horo and I worked there transporting water on foot and chasing birds from the fields for a few measures of grain. I had nothing left. The rest of the family, those who were still alive, were rescued at the well by trucks from Timbuktu; they had nothing left. They entered, with my own wife and children, the relief camp at Timbuktu. They thought that I was dead. I heard that they were in the camp, that they were at least fed, so I went on to Macina, to Tenenkou. I didn't know anyone there, but I knew that the nomads there were better off than we were, so I went from encampment to encampment, and people gave me a few animals. I sold them to buy clothing for the family and a donkey. I returned to Timbuktu and I found the relief camp was closing, so I rented camels and took the family to M'Bouna. We went to M'Bouna because the owner of the camels wanted them there, so it was cheaper. Myself, I had no preference. At M'Bouna we rented donkeys to go to Adarmalene, and then we borrowed other donkeys to go to Akachene. We heard that people were being enrolled at Tin Aicha, so we came here at the end of 1974.

Man
Age 44
Previous Home: Timbuktu/Aglal
Family: wife (40), sons (14, 10, 4, 3), nephews (13, 7)
Bella Group

I come from a large family of Aglal; my uncle was the Ikeloutene *fraction* chief. We were never slaves; we had slaves of our own. We were sheepherders in the Gourma, and we also began to have cows gotten from selling sheep. There were eighty tents in our encampment. We moved from the river to the Upper Volta border in the *cercle* of Rharous. I always stayed with the animals when I was young; I never traveled and I never went to Koranic school. I was old by the time I married. It was to my current wife. She was chosen by my family because she is a cousin. We stayed with the family encampment, but once married, I began to build up my own herd. Nothing really changed until the drought. By 1973, all of my animals were dead. The rest of the family wanted to stay in the Gourma, and in fact they are still there in the old encampment, but I decided that I had to leave. I went with my wife and children to Timbuktu. We still had about twenty goats with us. We only stayed in Timbuktu for a short while because there was nothing there. We heard that things were better in Goundam, so we continued. I still had a donkey, so for two months I was a woodseller, but then the donkey died. We had to go into the relief camp. All of the goats had died too. We spent five months there. When the camp closed, we asked for land at Tin Aicha. We had tried farming a bit in the Gourma between 1969 and 1972. We grew melons and millet along temporary streams during the rainy season.

Man
Age 49
Previous Home: Goundam/Central
Family: wife (37), son (13), daughter (14), male cousins (16, 19)
Kel Taborak Group

I was born in the *arrondissement* of Douekire. My family were herders, cows and small livestock, but we also had fields on Lake Tele and on Lake Gouber. We moved with the animals around the eastern part of the *cercle* of Goundam, between Farach and the river, and our fields were farmed by tenant farmers. We went to Tele and to Gouber once a year, at the harvest, to get our share of the grain. Before the agrarian

reform, it was two-thirds of the crop. Then came the reform and we lost a good amount of land, and the tenant farmers, after that, got to keep half of the crop. Even what we had left, my brothers and I, we had to sell after the drought; we needed the money to survive. So now the family has no fields at all except those at Tin Aicha. Our whole *fraction* traveled together with the animals. There were only we three brothers in the family, with our father and mother, but our encampment had dozens of other families. My father died when I was very young, and my older brother became head of the family. We herded our animals and traded with Goundam and the other villages. Everything changed with the drought. Things started to get bad with the rainy season of 1968 and 1969 to the east of Goundam. We began to lose our animals. In 1972, we lost almost everything, and by 1973, we had to move to the relief camp in Goundam. We arrived three months after it had opened. Everyone from the eastern part of the *cercle* was forced to come there; they had nothing. I came with my wife and children. We stayed in the camp until it closed. Then I volunteered to go to Tin Aicha. I could not go back to our old encampment. We would have been miserable, so I preferred to go far away. My younger brother returned and he is now in Koranic school at Zinzin. My older brother tried to get some animals from one of the family's ex-slaves who had a large herd. He tried to convince the Bella that the animals belonged to all of the family and that he only had them because our father had taken care of him. The Bella refused to give him anything, so he waited until he had left the area on a short trip and he took forty cows. He went to Mauritania—he had to leave the country because the Administration treated it as stealing and was chasing him—and arrived there with twenty of the cows; the rest had died. He sold the animals and started a small trade in tea and sugar. He can't come back until the Bella has died. Myself, I went to Tin Aicha with my family.

Man
Age 72
Previous Home: Goundam/Central
Family: wife (48), sons (30, 25, 23)
Imadidarene Group

I was born at Tacoubao, where the battle was. My father was a herder with many goats, sheep, and cows. There were two boys and three girls, and I was the eldest. We had one servant for the

household, and she also helped my father with the herding. We moved between Farach and the Goundam River. I went away to Koranic school when I was ten, and I spent four years traveling with and working for the *marabout* around Tin Telout. There were about twenty of us. When I returned to the family, I took over the sheep and goat herd. I made short trips to sell animals and to buy grain, to Goundam, Tonka, Timbuktu, but usually I stayed with the family and with the animals. My father had died and I was head of the family and worked with my brothers. When I was about thirty I married a cousin whom the family chose. We lived together for about three years with the rest of the family, but we didn't have any children. I divorced her because she didn't please me. I waited for three more years before remarrying, and then I married my current wife. We had three sons and a daughter, but the daughter died. After my father's death, the livestock began to diminish, but it was still our only livelihood and we remained in the same encampment. The children studied with a Koranic teacher in the encampment. In those days there were twenty or thirty tents, and *fractions* moved around together. We were with ten other families who never left one another. It's not like today when everyone is independent. Our life continued like that until the drought. It began slowly. In 1968, there was no rain around Tacoubao, so we went east of Timbuktu during the rainy season. In 1969, the same thing happened and we had to go to Lake Horo. Nineteen-seventy-two was very bad, and then 1973 was catastrophic. We were at Tacoubao when we heard of the camp in Goundam. We went directly there—only the family; the other tents didn't go. We were among the first residents of the relief camp. We still had ten goats left and we borrowed donkeys to get to Goundam. We stayed in the camp until it closed and then we left for Tin Aicha. When the camp closed, the people who had fields were given seeds and sent away, and the rest, those without fields, were taken to Tin Aicha. My family had never had fields; we had never even farmed in the rainy-season water holes. None of my *fraction* had ever had anything to do with farming. We had always bought our grain—it was a major part of our diet—from sedentary people, from farmers. Only during the rainy season did we live totally on dairy products. We were always in contact with Goundam; we sold cheese, butter, and animals to the farmers, and they sold us grain.

Man
Age 60
Previous Home: Timbuktu/Ber
Family: wife (38), sons (25, 20, 12, 10), daughter (4)
Moor Group

I was born in the *arrondissement* of Ber, in the *fraction* Oulad Borsibe, in the year when the bandits pillaged the Taodenit-Timbuktu salt caravan. My family were nomads and herders. We had many sheep and camels, and every year the ex-slaves took the camels in the caravan to Taodenit. I had five brothers and five sisters, and I was the youngest. I never saw my father because when I was born, he had already been killed by the caravan bandits. He was traveling with his Koranic students when they were attacked. His rifle jammed and he was killed. Then my older brother became the head of the family. There were enough animals to keep the whole family together. I herded the camels from well to well. And later I traveled with the salt caravans; I was always moving. We went all the way to Ouagadougou to sell the salt and we came back with grain. I went with two of my brothers and about twenty camels. It was twenty days from our encampment to Taodenit, and it was also twenty days from the encampment to Ouagadougou. We started in May and we traveled all through the hot season. Sometimes we joined other people going in the same direction. We all went to Ouagadougou because salt was expensive there and other merchandise was cheap, and then we came back through many farming villages where grain was cheap. We had many problems with customs officials; we only traveled at night and in great secrecy. I continued with the trade until the drought killed the camel herd. After many years in the salt trade, I got married; I was about twenty-eight. My wife was chosen by my sisters, and it didn't work, so we separated after two years. We hadn't had any children. I had waited a long time before getting married because I saw that my family, my sisters, were not too interested in it, and I was right, it didn't work. My second wife I chose myself. I took her from her encampment when I was traveling with the caravan, so there was no one else involved. I had three children with her, but then she died in childbirth with twins. I never would have divorced her because we had had children. Because I had small children and because I was always traveling, I had to marry again. Three months after the death of my second wife, I married my current wife. The family stayed in my own family's encampment and I traveled. I became a hunter to

provision the caravan; it was what my father had done. I never stayed with the caravan itself. I always traveled several kilometers away from them, with my father's rifle, and shot game. We continued the salt trade until 1972, but we soon stopped going to Ouagadougou. It became too difficult. We stopped instead at Timbuktu, which was a very good salt market. And we knew the city because we always bought our supplies there. We even had relatives there In 1972, I left our encampment for Timbuktu because all of the animals had died. I spent two years there working for other caravan traders watering and grazing their camels. I watered animals in the city for the local people. There was a relief camp there, but I didn't want to join it; it was too crowded and I preferred living by my own means. In 1974, I heard that things were better in Goundam, so we went there. But we had to go immediately into the Goundam relief camp because there was very little work available. I collected wood to sell and I worked as a laborer, but it wasn't enough. I had my whole family with me, my wife and children. My brothers and sisters were still at the family encampment with a few animals. We had gone there first, but they didn't take very good care of us, so we left. We stayed in the Goundam camp until it closed, and then we volunteered to go to Tin Aicha.

Woman
Age 40
Previous Home: Timbuktu/Ber
Family: daughter (20), sons (17, 10, 7)
Kel Antessar Group

I was born at the well of Anou Ishalarene, in the far north of Ber. My family herded cattle and sheep. I had six brothers and four sisters, but one of the brothers and one of the sisters have died. I was in the middle. When I was a child, I didn't do anything productive—when I was about twelve, I started to do some household work, sewing tents and making leather goods, but it was a large encampment and there were many other people to do the work. We had many animals and we never needed grain; we lived on the milk and meat. In the cold season, we lived around the well where I was born, and with the hot season, we began moving toward Ber and toward the river. I married a young man, my cousin, when I was fourteen, and we lived with his family. We had two boys, but they died of measles. And then after we had been married for about three years, my husband

died of an infection, something like tetanus, from a thorn, I went back to my own family, but just after the forty days of mourning, I was asked in marriage again. It is not good to stay with your family if you are able to get married. But this time I negotiated my own marriage. He was another cousin, and younger than I was. He took me to Tin Boucrine; it was the first time that I had left my own family's area, but it was still in the North. My new husband was also a herder, but he was more or less permanently settled at the well of Tin Boucrine. We had nine children; five of them have died. I still have one daughter and three sons. Tin Boucrine was excellent for livestock; the animals did well in all seasons. There were many trees, so that even when the grass had disappeared, the animals continued to fatten and to give milk. But 1971 was a bad year, and many of the animals died. And 1972 was the worst year ever, worse than 1973. Almost all of the animals died in 1972; there was no pasture and no water. Many of the people died too. Most of those who were left went to Timbuktu in 1973. We still had 100 goats when we left for Timbuktu, but many other people waited too long. The Government sent trucks to the wells, but many people died on the road to Timbuktu, and others were too sick and weak to get into the trucks because they had waited too long before sending to ask for the trucks. Many others arrived in Timbuktu, but died after one meal. It was only later, when relief supplies were brought from Timbuktu to the *arrondissement* center, that the death rate went down. We arrived in Timbuktu—it was my first time in a town, but we spent only fifteen days there because we heard that things were better in the *cercle* of Goundam, so we went on. We still had a few camels, so we arrived before anyone else. We went first to Farach to see the fields of my husband's family on Lake Kamongo (his ancestor had owned the fields and the *fraction* held 2,000 meters of lakefront). We had never profited from the fields; everything had always gone to my husband's relatives who were installed in the area. But in 1973 we got a bit of wheat, and then we went on to M'Bouna where we heard that there was more grain. We had to find grain because our goats had died at Farach. They were not well adapted to the southern area, and there was no grass, no water, just diseases. We spent two months and ten days at M'Bouna, and there my husband and three of our children died of cholera, so I became the head of the family. I did everything to feed the children who were left: leatherwork, hairdressing, shoe repair, making baskets. I stayed in M'Bouna until 1974, until I

heard that things were better in Adarmalene. I had managed to buy a donkey and some waterbags in M'Bouna, and I went to work at Adarmalene, where the water was far enough from the village so that I could sell it. I spent two years there by myself, but I had to work very hard. I built up a little stock of grain. In the second year, my husband's brothers, the uncles of my children, told me to come to Tin Aicha.

Man
Age 45
Previous Home: Goundam/Farach
Family: wives (39, 34), sons (20,19,12,8,5,2) daughters (14,9,4,1)
Kel Antessar Group

My family is Kel Antessar from Farach. It is an important family; we pay the taxes of a whole group of people. My father was independent—he left Farach with almost nothing and went to live in the *cercle* of Niafunke. After twenty years, he moved to the *cercle* of Rharous. He married there and that is where I was born. I had a lot of brothers and sisters, but now I have only one older brother and one younger sister left. After twenty years in Rharous, my father returned to Farach. He was brought back by the French, who had a census and were trying to stabilize the nomad *fractions.* My father paid the taxes of many Farach families, so the French wanted him in Farach. But he found life hard there, and he lost a lot of money. After four years, he gave up and returned to Rharous. After a year there, he died. I was six. My father's brother came and took us back to Farach, where he managed my father's herd. My father had left eighty cows and about three hundred sheep and goats, but they began to die very quickly. My uncle's family were not really herders; they were nomads, but they were more interested in their fields. They had fields on Lake Faguibine which were farmed by tenant farmers. By the time I was sixteen, there were only five cows and ten or twenty sheep and goats. We herded these in the Gourma of Rharous, where I had gone to live with my mother and her second husband. There were good years and bad years, but the herd never really grew. I spent one year in Kidal, studying with my older brother, who was a great *marabout* and doctor. When I got back to Rharous, some older men asked me to travel with them to Upper Volta and Ghana selling animals. Three or four of us left the Gourma with about fifty animals—I had some animals of my own and others that I was to sell on

commission for other people. We went to Ouagadougou where we loaded the cattle onto big trucks. It was a very hard journey and many of the animals died, but the prices were so good in Kumasi that we still made a lot of money. But it was difficult. Customs was always a problem, and in Ghana, there were many criminals and thieves. We just sold our animals in the market and came back as quickly as possible. I made the trip several times—almost everyone from the Gourma did—and once I took forty animals. Then I decided to marry, so I sold half my herd to buy clothing and a sword and wasted two years following women. In the third year I married my current wife. We went back to Farach, and I had to give up trading because I couldn't supervise the farming if I traveled. Then we went back to Rharous for two years, but my uncles convinced me to settle at Dari in the *cercle* of Niafunke, and they said that they would take care of me. There were nomads settling at Dari and we joined them. I bought a house lot and started building, but I had nothing and my uncles did nothing for us. When independence came, I decided to go back to Farach where the family was originally from. My father had bought a field on Lake Kamongo from some Bintagoungou people many years before, and I settled there and tried to farm it. We did well, and from four cows, the herd grew to twenty. The family lived well; we had lots of small livestock and some donkeys, and I had a camel. But then the river went into its low period and Lake Kamongo began to dry up. In 1971 and 1972, there was a small harvest, but by 1973, there was absolutely nothing. During all this time we had been settled near our field. The animals come slowly, so herding hadn't become a big problem. I had taken up fishing, too, in the lake, but when the water disappeared, there was nothing left. We went to Adarmalene, on Lake Faguibine, where there was still water. But we had no farm land; my family's fields on Lake Faguibine were under water in 1973. Life in Adarmalene was miserable. I spent all of my time looking for a little grain, even tree roots, for my family. I had a few animals borrowed from relatives and one cow of my own, but I had to slaughter that to feed my family. In the rainy season of 1973, we moved around with relatives and I herded their animals. I also got back a few goats I had loaned to people in Farach. In 1974, the water went down a little in Lake Faguibine and we returned to the family fields there. But they weren't the fields my father and my uncle had left. In 1967 and 1968, the Government had redistributed the land around Lake Faguibine and my family got only 1.5 meters

of lakefront a person. The rest of our land was given to other people. We stayed on the little land we had until the harvest of 1974. Our share of the harvest was only twenty measures of sorghum, ten of rice, four of beans, and about a hundred kilograms of sweet potatoes. And my family was very large. I had heard about the relief camp in Goundam, and at the end of 1974, I had to send my second wife and her children there. The rest of us stayed in our fields. Then the Goundam camp closed. The authorities asked who had farm land. My son who was there said that we did, so the family had to leave the camp. Those who didn't have any land were given provisions by the Government and brought to Tin Aicha. There were fifty-three families. I went to Goundam and got my family and brought them to our field. Then I heard that there were to be 100 families at Tin Aicha, so I came and enrolled myself and my family.

The Population

When the second AFSC representative, Stephen Morrissey, succeeded Eva Mysliwiec in 1978, conditions at Tin Aicha had changed dramatically. Change would continue throughout the period of AFSC involvement and beyond. Most had been for the better; the progress can be attributed to the imagination and determination of the settlers and staff.

The Tin Aicha population is divided geographically into two villages. Tin Aicha generally includes both the first and second community of settlers. When a distinction between the two communities needs to be made, the first is generally referred to simply as the First Village and the second, the Second Village. The Second Village started in December 1975 and like the First Village it began with 100 families. Three ethnic groups are represented in the two villages: Tamashek, Moor, and Bella. Of these the Tamashek are by far the most numerous, followed by the Moors. In 1978, only eight Bella families lived at Tin Aicha.

Two languages generally are spoken in Tin Aicha: Arabic and Tamashek. The Arabic speakers are primarily from the large and influential Kunta clan. The Tamashek speakers are primarily from the Kel Antessar clan (which coincidentally is the priestly counterpart of the Kunta clan among Tamashek). Seven nomads understood and spoke some basic French.

The population of the First Village is mostly non-Tamashek and most families come from outside the Goundam *cercle*. The Second Village is mostly Tamashek families from the Goundam *cercle*, many of whom camped on the outskirts of the First

Table II
POPULATION BY AGE
(as of June 1979)

Age	Number Males	Number Females	Age	Number Males	Number Females	Age	Number Males	Number Females
[illegible]	10	8	29	8	21	58	1	0
1	12	8	30	4	7	59	7	11
2	14	12	31	4	10	60	1	0
3	18	16	32	1	11	61	1	1
4	24	22	33	5	10	62	1	3
5	9	7	34	8	24	63	1	0
6	17	29	35	3	3	64	7	6
7	10	14	36	3	4	65	2	1
8	11	6	37	9	22	66	1	1
9	18	15	38	5	2	67	1	1
10	19	24	39	11	21	68	1	0
11	20	28	40	5	6	69	4	5
12	21	13	41	4	11	70	0	0
13	10	9	42	1	4	71	1	0
14	31	20	43	1	3	72	1	0
15	14	4	44	19	14	73	0	0
16	8	8	45	2	2	74	2	0
17	10	12	46	0	1	75	0	0
18	6	5	47	4	1	76	0	0
19	24	16	48	0	0	77	0	0
20	13	5	49	10	8	78	0	0
21	9	9	50	3	1	79	2	1
22	13	3	51	1	3	80	0	0
23	7	6	52	2	3	81	0	0
24	11	9	53	4	2	82	0	0
25	3	8	54	13	10	83	0	2
26	8	3	55	3	0	84	0	0
27	6	9	56	0	0	85	2	0
[illegible]	1	4	57	0	1	[illegible]	[illegible]	[illegible]

Total Men & Boys: 54[illegible] **Total Women & Girls: 560** **Total Population: 1104**

Village and observed its development. Fewer intact nuclear families and more women heads of families live in the Second Village.

Coping with the new way of life was easier for the second group, which was more homogenous from the beginning. The first group, whose members were often cut off from their wider circle of relatives and more destitute, showed more perseverence in the face of difficulties.

The only criteria for membership in the Second Village were need and desire. (The one exception was families who had left Tin Aicha I. They were not considered for residence in Tin Aicha II.) The quota was filled easily on a first-come-first-served basis. Nomads had shown interest in the Tin Aicha experiment, and many applied for residence in the Second Village before the official announcement was even made in their districts. Registration was administered by the school director, in consultation with the village council.

BEST COPY AVAILABLE

Table III
POPULATION BY ETHNIC GROUP AND GEOGRAPHIC ORIGIN*

Ethnic Group	Fraction	Cercle/Arrondissement of Origin	Families Remaining	(Families Departed)**
Moors	Berabiche	Timbuktu	11	(4)
		Rharous	1	
		Goundam/Raz el Ma	1	
	Kounta	Bourem	8	(2)
	Kourchane	Timbuktu	1	(1)
	Tedjakant	Goundam/Central	0	(1)
Bella	Akaloutane	Timbuktu	1	
	Essakane	Goundam/Farach	6	
	Cherifene	Goundam/Bintagoungou	1	
Tamashek	Kel Antessar	Timbuktu	12	(1)
		Bourem	1	
		Goundam/Farach	48	(5)
		Goundam/Gargando	13	(1)
		Goundam/Raz el Ma	16	(3)
		Goundam/Central	1	
	Imididarene	Timbuktu	8	(2)
		Goundam/Central	6	(1)
		Goundam/Farach	1	(1)
	Cherifene	Timbuktu	2	(1)
		Goundam/Raz el Ma	0	(2)
		Goundam/Central	1	
		Goundam/Gargando	4	(1)
		Goundam/Farach	2	(1)
	Kel Tichrayene	Goundam/Farach	9	(11)
	El Wassra	Timbuktu	0	(2)
		Goundam/Farach	1	
		Goundam/Gargando	1	
	Inatabene	Goundam/Gargando	2	
	Kel Rezzaf	Goundam/Gargando	1	(1)
	Kel Taborak	Goundam/Central	1	(1)
	Tinguereguif	Goundam/Douekire	0	(1)
	Kel Ertack	Goundam/Central	1	
	Idnane	Goundam/Gargando	2	
	Imrad	Bourem	1	

*As of January 1978, when enrollment (and thus land and livestock grants) ended.

**Families which abandoned the village or were asked to leave by the village council.

The timing of the arrival of Second Village settlers reflected poor planning on the part of administrators. Even under the best conditions, their first crop could not have been harvested for eight months. Eleven families became discouraged and left. The rest relied on off-season crops—beans, melons, and sweet potatoes—borrowed grain, and minimal Government supplies. After the initial hardship, however, the Second Village attained a level and style of living roughly equal to the First, and most of the conclusions drawn about Tin Aicha apply to both settlements.

BEST COPY AVAILABLE

Table IV
FAMILY SIZE*

Number of Members	Number of Families	Ethnic Group	Average Family Size
1	4	Tamasheh	3.6
2	12	Moor	7.0
3	14	Bella	8.6
4	23		
5	27		
6	30		
7	21		
8	21		
9	7		
10	12		
11	4		
12	3		
13	1		
14	1		
15	1		

*The total population here does not match the total population recorded on Table II. Each total represents the number of people residing at Tin Aicha at the time of each census.

Personnel

From early 1975 on, all Malian project staff except the veterinary technician resided at the project site. Since most were unfamiliar with both the population and the desert environment, Tin Aicha presented a considerable challenge to their ability to cope and function effectively. They had to contend with isolation, inadequate transportation, a reduction in familiar necessities and comforts, and, except for the teachers, little knowledge of the people with whom they were working. At first, the *commandant* visited Tin Aicha almost once a week. He made sincere efforts to alleviate the troubles of staff and villagers despite limited supplies and his many other responsibilities.

Nevertheless, the staff felt themselves to be overburdened and misused. In addition to teaching, and sometimes instead of teaching, teachers were responsible for such matters as the inventory of livestock and the village census. They also acted as interpreters and mediators among the villagers, the team, the extension agents, the Government officials, and the project director.

The AFSC representative assisted staff where she could

—helping with the census and livestock inventory, for example, and acting as intermediary and sometimes as mediator between staff and authorities, staff and villagers, and staff and other staff. She also attempted to help the staff solve some of the overall problems through regular meetings and activities. It was found that constructive criticism and suggestions were more readily heard by some authorities when they came from her rather than from the Malian staff.

Some of the initial staff lacked motivation and personal commitment, due in part to the lack of interest and support from their respective services and to inadequate communication between them and the local authorities. The nomad teachers, because they had many relatives in the village, felt that they had to share their own limited food and other resources. They also felt too involved in everyone's problems. Certain staff members lacked self-confidence and experience and failed to gain the respect needed to deal with the population.

Because of difficulty in finding a trained social worker who would accept placement in Tin Aicha, the search was opened to local women who had the interest but not the experience to do the job. A young woman from Goundam was chosen and trained by the AFSC representative, who also trained three young women from Tin Aicha as health/nutrition aides. An agricultural technician trained five men as agricultural assistants, whose duties included explaining new concepts and encouraging their fellow residents.

When the local *commandant* who originated the project was succeeded in 1975, the presence of the AFSC representative provided an element of stability and continuity. She assumed some leadership and administrative duties and continued to work to bring staff and villagers together. This was necessary, as the change forced the residents to rely more on themselves and local resources.

Eva Mysliwiec found frequent travel to Bamako, Mali's capital, to be crucial in securing project support and development. Her successor, working with a more firmly established population, deliberately refrained from seeking help from Bamako ministries and instead tried to help develop indigenous leadership and to integrate Tin Aicha into local government structures.

By the end of 1979, the full complement of resident Malian staff had been reached: seven teachers, one of whom was an Arabic-speaking teacher of the Koran; a nurse; an agricultural

technician; and a social worker. The team was functioning smoothly after the initial period of strain. The teachers, agricultural agent, and social worker lived at Tin Aicha with their families under the same conditions as the local residents, and their children attended the Tin Aicha School.

Agriculture

The agricultural aspects of the project were perhaps the most difficult for the nomads. Farming was an occupation which was alien to most of them, who traditionally viewed it as a demeaning activity. The strenuous labor required to clear the land of its dense weeds was particularly difficult for people physically weakened by malnourishment. Their work also constantly was threatened by factors beyond the villagers' control, such as infestations of rats, mice, birds, and grasshoppers.

Lake Faguibine, fed from the Niger River, is distinguished by its decades-long cycle of rising and falling water levels. Such fluctuations, with the edge of the lake advancing and retreating several kilometers, have important effects upon farming; when the water is falling, cultivation follows it, and the moist perimeter of the lake is wide. When the water is rising, the flood plain of the lake is narrower, and cultivation is forced back. In recent years, the water level has been receding, and farming has been good. In addition, the lake follows the yearly cycle of all Sahelian water sources, rising and falling with the rains.

Members of both villages received seeds for wheat, sorghum, corn, beans, melons, and garden vegetables. In the first year, the seed was free; in succeeding years it was loaned, each family returning the amount borrowed to the agricultural agent after the harvest. In this way the nomads could plan ahead and ensure the availability of seeds, which would be especially important when funds were no longer available from the AFSC.

In 1975, certain local traders took advantage of Tin Aicha farmers at planting time, when they were most vulnerable, by advancing them cash or supplies to be paid back in grain after the harvest. Never having planted before, the nomads were unaware of the probable quantity and value of their future crops. Later they had to buy back grain at twice the price they had been paid for it only months before. This painful experience led to the organization of a cooperative storage system, whereby families sold their grain crop to the community cooperative at the official Government price. If they needed grain later, they could buy it back at the same price they had been paid for it.

Tin Aicha's crops have varied, but rice and sorghum are still

its staples. Sorghum, planted in April and May and harvested in September and October, is grown farthest from the lake and needs some rain to ensure its success. Fast and slow growing varieties of rice are planted in February and March, transplanted from May and June on, and harvested from September until the rising lake water drowns the rows deepest in the lakebed. Corn, beans, and melons are planted in January, April, and July, and harvested in March, June, and September. Sweet potatoes and vegetables are planted in August and November and harvested in November and January; the November planting is above the high-water mark and watered from shallow wells. A few farmers plant cotton and peanuts.

Tin Aichan transplanting his rice, Lake Faguibine.

BEST COPY AVAILABLE

Traditional farming methods.

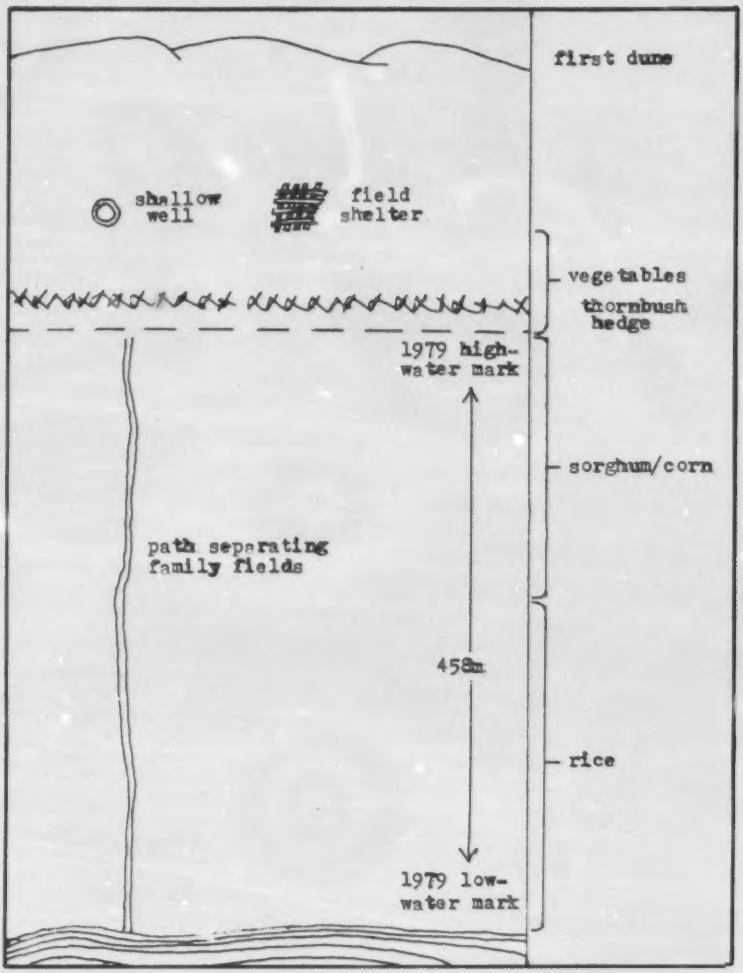
Production has been mostly for family consumption, although at the height of the sorghum and rice harvests, the lake is lined with the temporary shops of merchants from as far away as Gao (400 km). The monetary economy disappears for a few weeks, and grain is traded for cloth and other necessities. Some grain and much of the corn, sweet potato, and vegetable harvests are also sold throughout the year at Tin Aicha's weekly market.

Land was distributed to all families in Tin Aicha according to the number of active family members, including the families having no males or male heads of household. The First Village received from the Government a total of 380.95 hectares of land, which was then divided into two-meter strips extending to the low-water mark of the lake. The Second Village was allocated 346 hectares.

Each family was assigned as many strips as there were active family members. In order to receive more land, many families registered people who did not exist, or invited distant relatives to visit during the census in 1975. The aid of the village council was needed to determine the real number of people per family residing in Tin Aicha. After the first harvest, land was redistributed according to the corrected records.

BEST COPY AVAILABLE

Figure 6
SKETCH OF A TIN AICHA FIELD

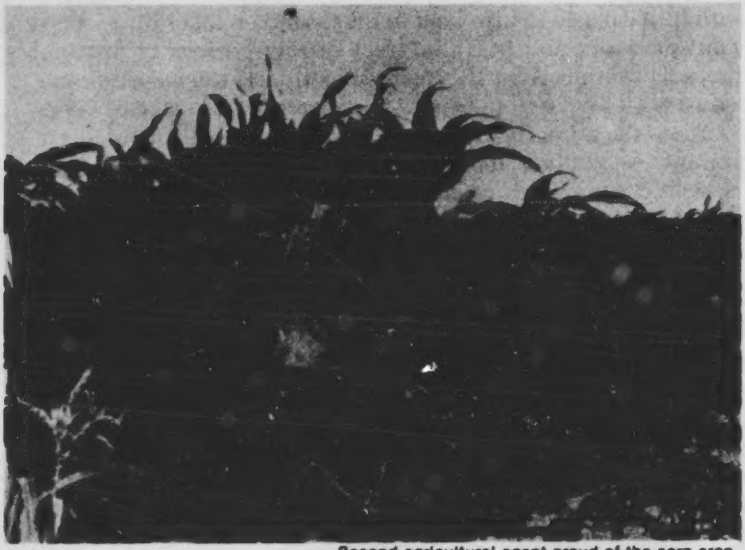


The rat infestation that devastated crops in Tin Aicha in 1975 and 1976 extended throughout Mali, Senegal, and Niger. Tin Aicha residents planted wheat and vegetables, and the rats ate every seed in the ground. Once-bountiful fields and vegetable gardens might as well have been mirages. Rats chewed through tents, clothing, and bedding, and ate rice from the previous

harvest that was thought to be safely stored in large plastic bundles in underground pits. The only system devised to eradicate the rats was to net them and then club them to death. A bounty of dried milk was given to anyone bringing in 100 rats. In one week, nearly 100,000 rats were killed and burned.

Despite the serious and prolonged damage caused by the rats, the rice and sorghum harvest of 1976 was good. Families camped in their fields to scare animals away, and fines were imposed on families who allowed their stock to roam in the fields. Beans, melons, potatoes, and other vegetables supplemented the grains during the dry season.

Unfortunately, very little of the village's early agricultural success can be attributed to the work of the first agricultural agent, who did not speak the local language and failed to gain the respect of the villagers. He was later replaced by a new agent who had several years of experience in the region. The new agent's plans included disseminating agricultural information and providing specialized training where needed. He started a demonstration plot to test different varieties of seed and to introduce various vegetables. Members of the community worked the plot to gain experience and to see the advantage of a carefully planned and tended field. Produce from this plot was sold and the money was used to purchase agricultural equipment.



Second agricultural agent proud of the corn crop.

BEST COPY AVAILABLE

Much of the initial learning experience came by trial and error. For example, a number of the new farmers mixed different varieties of rice seed together at planting time. Some varieties ripened before others, so that when the plot had to be harvested, much of the rice was still inedible. In 1976-77, greater experience on the part of the farmers and assistance from a competent agricultural technician made for a considerably improved rice harvest. Some families had carefully sorted their varieties of rice and proudly harvested three crops in the same year. The experimental plot produced two tons of potatoes. Sugar cane, tested as a possible source of fodder, appeared to thrive.

Even if Tin Aichan families did not have to sell grain in order to buy other necessities, their harvest—at its best—would support them only for part of the year. Had the land been top quality, it might have been sufficient, but it was neither fertile enough nor extensive enough to grow a year's worth of grain for the whole village. The limited rain in 1978 allowed most farmers to harvest only a two- to three-month supply of grain, and the 1979 rains, best in a generation, produced only enough grain to support families for six months.

One possible means of improving this situation would have been to increase the land available to the residents. This was attempted, but requests for additional land for the project met with little success. Farm land in the Goundam lakes district is a valuable asset, and its value rises during periods of low and sporadic rainfall. Also, the ownership of land was never clearly defined. All land within twenty-five meters of any lake or water source is the property of the Government, which distributes it to citizens—sometimes those who have cultivated it for generations, but sometimes to civil servants and others, as political favors.

Despite the AFSC concern for a high degree of citizen control of the project, several rules relating to agricultural production had to be made at the beginning. One was that any resident who was absent from Tin Aicha for more than three months, or who left the fields unworked for that long, was removed from the list of residents and his or her land was assigned to a new citizen. A warning and probation period were allowed the offender. This solution was neither a pleasant nor an easy one, but the reality was that those who abandoned their fields could never hope to become self-sufficient in Tin Aicha. Since prolonged absences were often caused by travel to distant towns and markets to

shop, the establishment of the consumer-cooperative store in the village alleviated the problem to some extent.

Another rule was that all families had to work their own land. By 1978, however, some Tin Aichans were working as day laborers on fields in other villages, and by 1979, Tin Aichans were hiring day laborers for their own fields. Although rare, this was a cause for concern because it followed a traditional division of labor along racial and class lines—the Bella, traditionally farmers, were working for the Tamashek, traditionally herders, while the Tamashek were traveling with the herds. Most Tin Aichans, however, divided farming and herding duties among their own families, and only those who owned additional fields outside Tin Aicha had become closely involved in the tenant-farming system.

Farming was perhaps the greatest change the nomad settlers faced in Tin Aicha. While those from Goundam had watched others farm, very few ever had worked the fields themselves, and nomads from outside the *cercle* of Goundam had no experience with it at all. The skills of agriculture traditionally had been confined to the lower classes of nomad society. Initially, when Tin Aichans in the fields sighted outsiders, they would put down their tools, put on their turbans, and pretend to be just passing through. Soon, however, the new farmers began pointing to their crops with pride.

Livestock and Herding

Livestock raising not only filled some of the village's economic and nutritional needs, but also allowed the nomads to maintain an identification with their way of life. In keeping with the nomads' traditional system of reimbursement, the animals were distributed (in early 1976) with the understanding that, at the end of four or five years, each family would return the same number of animals (probably offspring) they had received. The Government would, in turn, give these animals to new groups who would settle in villages similar to Tin Aicha. (As it turned out, the lack of suitable farm land made the creation of new villages impossible, and the repayment plan was used to create a cooperatively-owned herd instead.) If a family lost an animal before it had reproduced, the obligation to remit an offspring in payment was cancelled. Animals were branded so their ownership was clear.

Livestock, like land, was distributed according to family size. Families of up to three members received one cow and one sheep, both either with offspring or carrying young. Families of

First livestock distribution.

Tin Aichans taking ownership of livestock.

four to seven members received two of each animal, and families of eight to twelve members received three of each. Ten bulls and ten rams were bought to service the herd.

The livestock raising aspect of the project was very satisfying

BEST COPY AVAILABLE

for the population, and the system of reimbursement which had been developed meant that the Government could continue it without added expense. Nevertheless, this part of the project created more problems and ill will among the villagers than any other, precisely because it was the aspect with which they were most familiar.

When people were asked which animals they would prefer, all opted for goats rather than sheep, because sheep do not give as much milk, and their milk is harder than goat's milk for children to digest. Sheep are also less resistant to Tin Aicha's environment. The Government, however, has a national policy against goats, which are said to damage the already depleted environment.

Although the Interministerial Committee never did relent in its opposition to goats, that did not prevent Tin Aicha residents from purchasing them with their own savings. Many families did this, often before satisfying other family or household needs.

Not only were sheep purchased by the project instead of goats, but at one point cows that would not calve for two years were bought. This added to nomad resentment over their lack of participation in the original livestock purchases.

Although the animals were owned by individual families, they grazed together in a communal herd. Several systems of managing the communal herd were tried, but none was without some problem. At first the Government authorities, not trusting the nomads, employed two outsiders to herd Tin Aicha's animals. Since the livestock did not belong to them, the herders had no personal investment and were quite careless with the animals, selling or consuming milk that should have gone to calves. After much protest by the nomads that they were not being allowed to enjoy the pastoral aspect of the project, it was agreed that the owners themselves could assume herding responsibilities on a rotating basis. After a trial period, the villagers also became dissatisfied with this system and claimed that their livestock was not well supervised because the herd was too large. They then separated the herd into four groups and made one section of the village responsible for each group; unfortunately, this method fostered a separation of the village into four opposing factions. Both the local project administrators and the Tin Aicha population sought a more satisfactory solution. Finally it was agreed that project funds would be used to pay herders who would be chosen by the villagers. The project would be repaid in grain collected from each family at harvest time. In 1976, this

system began and worked without incident or interference from staff or administration.

Many people did not believe that the livestock belonged to them, and would not believe it until they had paid back their loans. However, repayment could be difficult with the high mortality rate among sheep. Although families did not have a reimbursement obligation for animals which died, the heavy losses of sheep reduced their incomes to such an extent that even repayment for those that lived became difficult. There was also the problem of the increasing disappearance (usually sale by individual owners) of sheep. Fearing that without a safeguard many families would find themselves with no livestock at the end of the three years, the Malian staff and the AFSC representative required herders to keep track of individuals who withdrew their animals from the herd. They also had to provide proof when animals died of natural causes.

Several meetings were held with the villagers to devise an alternative livestock reimbursement plan. All agreed that they did not want to annul their obligation, but they felt that because of heavy losses, each family should be required only to return one cow and one sheep, regardless of the number of animals they originally had received. Cash rather than in-kind reimbursement also was suggested as an option that might have the additional benefit of boosting the village economy.

It was also at this point that the villagers proposed a livestock cooperative which would be responsible for management of the herd that was being created by the reimbursement plan. The cooperative herd would be kept separate from family herds, and profits from the cooperative herd would provide a security fund of sorts for the village. Some animals would be sold each year to meet urgent village expenses (well repair, medicines, school supplies). The rest of the herd would continue to multiply and accrue profits through the sale of milk and its by-products.

The new reimbursement scheme provoked considerable doubt among Interministerial Committee members. They agreed, however, on the importance of supporting those who wished to remain at Tin Aicha by turning herd management over to them, though this could not be done effectively until the villagers felt they had paid for the herds. The committee therefore accepted the villagers' proposal. They authorized cash reimbursement and the creation of a cooperative herd, purchased with reimbursement funds. Tin Aichans began their reimbursement when the 1978 harvest gave them ready cash. By

December 1978, repayment had been completed.

In April 1979, an elected purchasing committee bought fifty-five cattle and twenty goats for the cooperative herd. Almost all of the animals came from Tin Aicha family herds. An elected herder took over the cooperative herd, receiving in annual payment a young steer and one-third of the herd's milk. The cooperative organization, *Federation des Groupments Ruraux* (FGR) sold the remaining two-thirds of the milk and milk by-products.

As an agricultural population in a semidesert zone, Tin Aichans found herd management difficult. They needed to keep their animals nearby through as much of the year as possible in order to realize the greatest profit from them. Yet keeping them close to the lake during the dry season left them open to attack by waterborne parasites. The herds also damaged newly sown fields (usually those of their owner, but often those of a neighbor as well). Water and pasture elsewhere, however, were scarce. Even during the rainy season, many of Tin Aicha's animals did not leave the lake as did the outside herds that came for the dry season.

The growth both of family herds and the cooperative herd met several further obstacles. Some families, given inferior livestock, suffered early losses from which they never recovered. Others suffered losses due to poor management. Others, preferring to invest in their fields, had smaller herds by choice. Some were forced to sell animals to recoup losses suffered in farming. Some, however, and particularly that minority who were successful in predrought herding, have created herds which satisfy all of their family needs. The tables on pages 78 and 79 detail herd size, its distribution between the two villages, and its value.

Tin Aicha's most successful herders have been those who, because of family composition and herd size, could allow some family members to move from pasture to pasture with their animals and only return to Tin Aicha for a short period of time. This sort of transhumance (migrant herding) from a fixed base was a long-term goal for most, but some have had too few animals to support both a part of the family at Tin Aicha and another part on the move; others have had too few working family members to cover the demands of both herd and field.

The Fulani, a nomadic group not represented at Tin Aicha but present in other parts of Mali, have adopted a similar type of transhumance. A few herders move directly to southern

Table V
HERD SIZE*

Species	Initial Distribution 1975-1976	Final Census 1978 Predissolution Communal Herd	After 18 Months Individual Management
Cattle			
First Village	208	343	187
Second Village	**175**	**190**	**108**
Total	383	533	295
Sheep			
First Village	206	341	409
Second Village	**177**	**245**	**228**
Total	383	586	637
Goats			
First Village			730
Second Village			**693**
Total			1,432
Donkeys			
First Village			55
Second Village			**20**
Total			75
Camels			
First Village			11
Second Village			**6**
Total			17

It is immediately apparent that the cattle herd rose under communal management and fell after a year-and-a-half of individual management. Many families found that the care of two or three head of cattle, unless they all happened to be milk cows, tied up limited resources and was unprofitable. Cattle, therefore, were often sold. Goats, inexpensive and quick breeding, sometimes replaced them. Donkeys and camels, beasts of burden and transport, attracted others who saw profit in commerce.

*Figures for 1975-1976 and for 1978 are accurate, the results of the organized census of the communal herd. Exact figures for 1979 and beyond are not available since the herds are individually managed and widely scattered.

pastures at the onset of the dry season and stay there until the new wet season brings sufficient grass and water to the North. Thus the animals are moving while in their most robust condition, during the wet season and at the very beginning of the dry season. This system, however, separates most of a family from most of its animals for most of the year. It has attracted only those with herds big enough to risk losing the few animals they leave behind with their families to provide for everyday needs. Few Tin Aichans can afford this risk.

Lack of funds and the shortage of qualified personnel prevented the placing of a Government livestock service agent at Tin Aicha, as was suggested early in the project. Like the rest of North Faguibine, Tin Aichans have relied upon periodic visits

BEST COPY AVAILABLE

Table VI
HERD VALUE

By Village

Village	1975-76 (MF = 420 = US $1)	1978 (MF = 475 = US $1)	1979 (MF = 420 = US $1)
First	19,740,000 ($47,000)	32,565,000 ($68,558)	29,035,000 ($69,131)
Second	16,645,000 ($39,631)	18,600,000 ($39,158)	18,257,500 ($43,470)
TOTAL	36,385,000 ($86,631)	51,165,000 ($107,716)	47,292,500 ($112,601)

By Ethnic Group

Group	1975-76	1978	1979
Tamashek	27,390,000 ($65,214)	37,550,000 ($79,053)	35,342,500 ($84,149)
Moors	6,185,000 ($14,726)	9,625,000 ($20,263)	5,530,000 ($13,167)
Bella	2,810,000 ($6,691)	3,990,000 ($8,400)	6,420,000 ($15,286)

Differences between the two villages are marked. The First Village herd value rose by 65 per cent and then fell by 11 per cent, while the Second Village value rose by 12 per cent and then fell by 2 per cent. These are due in great part to the extra breeding year the First Village enjoyed, but previous herding experience and managing style may also be important. The Moors are almost all part of the First Village; the decline in the value of their herds is thus all the more remarkable. They own, however, proportionally three times as many donkeys as their neighbors, and many Moors are transporters attempting to become small merchants, a way of life with which they are familiar. Some of their livestock sales have capitalized these ventures. The Bella, whose traditions, unlike those of the Tamashek, do not constrain them from certain types of work, often have higher incomes than their neighbors, and they have invested some of this money in livestock. The Bella community at Tin Aicha is, however, very small, and individual differences may therefore be of considerable significance in these figures.

from Goundam for herd vaccination and antipredator campaigns. These services are Government funded, but Tin Aicha must pay transport costs from FGR profits. Animal health care and the existence of two good wells have made Tin Aicha a herding center for the northern lakeshore. This has stimulated the development of Tin Aicha's weekly market.

Tree Planting and Reforestation

Tin Aicha's settlers felled trees for house frames and firewood and cut brambles for fencing and cattle fodder. Although they were accustomed to viewing trees as an expendable resource, in December 1976, the Tin Aichans took the initiative to replace the trees they were using. The Interministerial Committee and local

BEST COPY AVAILABLE

forestry technicians recommended a planting program for the village. Two hundred *nimes* (a tropical tree variety) and *prosopis* were planted in and around the two villages. A tree nursery was started to supply saplings for future plantings.

The agricultural technician directed the planting with the help of ten young workers and with advice from forestry agents who visited regularly. The trees were watered from the well and protected by enclosures. After sandstorms, it was necessary to dig them out. The ten workers were paid the equivalent of ten U.S. dollars per month by the AFSC and received grain supplements when available.

A year later, 200 more *nimes* and *prosopis* were planted. Only fifteen of the original 200 trees had to be replaced at that point. At periodic meetings, families were urged to participate in the tree planting, and both villagers and staff hoped for further expansion of this limited resource.

Throughout 1978 and 1979, the AFSC paid the salaries of the ten reforestation workers. The FGR, however, by vote of the population, seemed unwilling to pick up the costs of their salaries after the AFSC left, and so it seemed likely that the reforestation project—at least those aspects requiring paid workers—would deteriorate.

The village council formed a forestry commission in response to visits from the Goundam Waters and Forests Department, which has the power to levy fines against whole villages for the destruction of surrounding trees, or confiscate axes and even livestock of offending villages. To forestall action by the department, the village council appointed five wardens to police the trees. If charged, the offenders must appear before the council, which determines the penalty. Since the creation of the village commission, the state of the surrounding trees has improved.

By the beginning of 1980, trees had been planted in the villages, in the communal field, in the tree nursery, and as windbreaks around the buildings that were being built in 1979. Perhaps one quarter of the roughly 400 trees were thought big enough to survive without further care. Although the trees around the school have been tended by the school children, and some villagers have shade trees which are well tended, those that are unprotected from goats, sheep, and sandstorms probably will not survive. An experiment with fruit trees cannot be considered a success; after five years, they have barely held their own, even with protective enclosures and daily care. The tree-planting program as a whole has been a valuable and impor-

tant experiment, but one of limited success.

Health and Nutrition

The first Tin Aicha residents were weak and malnourished, prime targets for malaria, pulmonary disease, and gastrointestinal disorders. There were, however, no serious outbreaks of communicable diseases. In the Second Village, the nurse found many more cases of malnutrition and clinical tuberculosis, and some deformities and chronic infirmities among the children. Conjunctivitis was a frequent complaint in both villages.

Washing areas and latrines were designated in 1975, and these, together with education about sanitary habits, led to a slow but constant improvement in health and personal hygiene. As people began to overcome their distrust of dispensaries and modern medicine, they took advantage of the nurse's services more regularly. Some still waited until their illnesses had reached a critical point, however, and others stopped the prescribed treatment at the first sign of improvement.

The completion of a village well, in July 1975, was a milestone for Tin Aicha. Formerly, villagers hauled limited quantities of dark, slimy water from the lake, half a kilometer away. Even after the water was filtered, its fitness for human consumption was very questionable. Residents appeared listless and lethargic, and to avoid frequent trips to the lake they used little water for hygiene. When the lake water was discovered to have eaten away the inside of a clay pot in which it was stored, plans were made to dig a well. When it was dug, the villagers found plentiful, sand-filtered water from fifteen meters down. In-

Well, first village.

BEST COPY AVAILABLE

testinal illness decreased, children and adults began to display greater energy, and domestic hygiene improved. Located in the center of the village, the well became a new focus for social interaction among the villagers. (A second well, further north, was dug in 1976.)

The first AFSC representative visited some of the sick at their homes, gave talks about health and hygiene, counseled pregnant women, and taught child care. She also initiated a nutrition program which functioned intermittently when she was at Tin Aicha. She demonstrated ways of preparing grains, vegetables, and fish, and explained their nutritional value. The foods were then sampled. Some of the new vegetables she introduced (tomatoes and cabbages, for example) must have pleased the people attending the sessions—the nutrition center garden was often raided after her demonstrations!

Nutrition center vegetable garden.

In the summer of 1976, the AFSC representative wrote health lessons in French which were then translated into Tamashek and recorded on tape. The lessons covered cleanliness, basic nutrition, sanitation, and various diseases. The tapes were played each day and were pertinent to the season — for example, during the cold season the lesson might have been on the prevention of respiratory illnesses and conjunctivitis. Attend-

BEST COPY AVAILABLE 70

ance at the nutrition center (a circle of mats in the center of the village) improved, and comprehension of health matters increased.

The four-month-long infestation of rats in 1976 did more than destroy crops and raise tempers — when the rats left, their lice remained. They caused terrible itching which made it impossible to work or sleep. No one was spared. The entire Sixth Region was affected, and there was great fear of a typhus epidemic. Finally the local agriculture department distributed insecticide; the entire village was fumigated three times. Many villagers and all resident staff burned their straw mat houses and built new ones. The straw mat dispensary and school rooms were burned as well.

The only other serious health problem to affect Tin Aicha in 1976 was a country-wide measles epidemic. It was less serious in Tin Aicha than elsewhere, but during the outbreak all communal activities were discontinued. Measles, malaria, and diarrhea were still the most serious diseases in 1977.

A shortage of health personnel was one of many problems that Tin Aicha shared with other villages of the *cercle*. The village had educational materials for a maternity center, but no one to train the midwives in more sanitary postdelivery procedures. (This was an urgent need because almost every woman of childbearing age was pregnant.) Another medical problem was the use of foreign medicines, often banned in their country of issue or experimental in nature. Even dosages of proven medicines were sometimes too high, lowering the nomads' normal resistance.

The resident nurse eventually was able to hire an assistant from the area, who was paid in food supplies from the project and proceeds from the sale of some medicines. There were complaints about insufficient medical supplies, but the Tin Aicha dispensary, with its access to AFSC funds, received more medicines than all the rest of the *cercle* combined (150,000 people). When the AFSC stopped providing supplies to the dispensary at the end of 1977, Tin Aicha had to rely upon its share from *cercle* medical authorities. The share was small, delivered irregularly, and the nurse had to spend much of his time in Goundam waiting for supplies. In 1978, the cooperative store began stocking often-needed medicines, an expensive but necessary undertaking.

The population considered itself fortunate to have medical services available and made frequent use of them, usually in

conjunction with traditional medicine. Only childbirth and mental illness remain almost entirely in the sphere of traditional medicine.

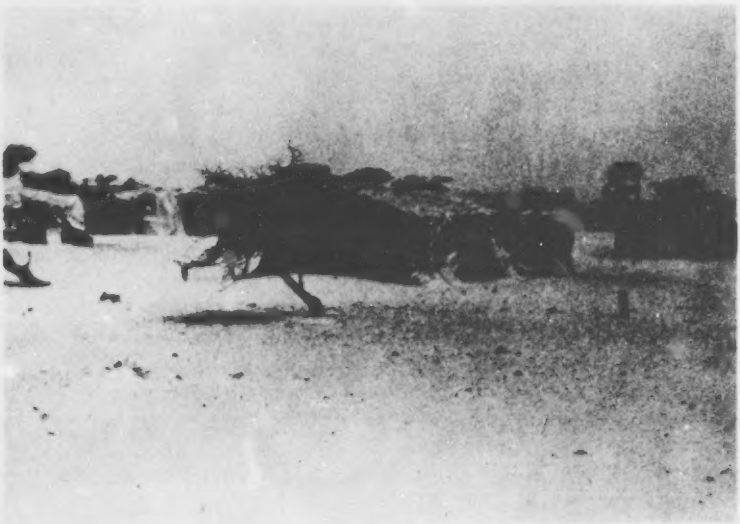
The dispensary is the only Government health service within fifty kilometers, and the nurse extends his service to other communities around Lake Faguibine. The existence of a dispensary entitles Tin Aicha to regular visits from an epidemic-disease-control service at Dire. Doctors visit Tin Aicha each December, vaccinating children against major childhood diseases and treating adults for potential epidemic diseases. This service is another reason for the continuing good health of Tin Aicha.

Nurse outside dispensary.

BEST COPY AVAILABLE

The Tin Aicha parents accepted the value of schooling from the outset of the project, contrary to the nomads' reputation for resisting formal education for their children. The fact that the Tin Aicha School was located in the village itself and administered by Tamashek teachers inspired confidence. The village-based school was a welcome change from the boarding schools where those children who did get a formal education had to be sent when the nomads led a more mobile way of life. Parents had objected to having their children separated from their supervision and affection and feared that the boarding school would alienate them from their own culture.

The Tin Aicha School, built in 1975 of hand-woven straw mats roped to wooden frames, enrolled seventy-three students between the ages of five and fifteen in its first year. Classes began behind schedule due to a delay in the construction of the school and in the arrival of class materials. Classes held through the summer made up for the delay and allowed a break in October for the harvest. There was one grade, with two divisions according to age. The children were later separated into grades one and two and a third grade teacher was added. The school then added one grade per year until in 1979 it became a full-cycle primary school.



Six straw shelters serving as the school.

BEST COPY AVAILABLE

A lunch program begun in January 1976 offered students a rice or sorghum dish with a fish or meat and vegetable sauce. Each child brought his or her own bowl to school. The lunch program received supplies from various sources: the World Food Program (WFP) provided some grain, oil, and canned meat; the National Nutrition Department contributed milk and grain supplements; and the village nutrition garden and the school garden supplied vegetables. The AFSC paid the salaries of the five villagers who prepared the lunches, and the project also bought condiments, meat, fish, and rice when needed. This arrangement created employment and encouraged the local fishing trade. The school director, the social worker, or the AFSC representative disbursed the funds for local food purchase.

A good lunch every day helped improve the health of the students and encouraged regular attendance. However, the teaching staff thought that the school should offer three meals a day, which would further improve attendance and health, and in 1979 this proved possible. The nutrition garden and the school garden continued to provide both vegetables and small amounts of cash to the school canteen.

The teachers relied on a bare minimum of books and supplies in 1976, some recycled from the previous year. School materials needed for the 1976 school year finally arrived in 1977. Fortunately, the regional officer was able to give Tin Aicha some school materials in the interim. All classes were then adequately supplied and some leftovers were anticipated for the following year. At the end of the AFSC involvement, in 1980, school supplies became the responsibility of the district government, which supplied other local schools from tax monies. Taxes also help cover costs of local parent-teacher associations.

In 1976, all of the straw mat structures which had been used for classrooms were rebuilt. Seasonal rains, sandstorms, and termites caused deterioration of the straw mats, and although the Ministry of Defense provided money for material from drought relief funds, this source would have been depleted by 1977. The question arose as to how Tin Aicha would be able to finance this annual reconstruction. The community could not afford to rebuild each year, and they feared that if they did not put up the straw mat structures, the Government would cease sending staff, and eventually there would be no school. In addition, the existing structures did not protect the children from the rain and cold, and they presented the danger of collapse as they

deteriorated. Villagers and staff felt that they would be much more secure about continuing education services if permanent adobe buildings were constructed. This finally happened in October 1979 when the school left its straw mat structures and moved into the newly constructed permanent building. Some details and sketches of the school, built with AFSC funds, are in this chapter under "construction."

In 1975, some of the students had had one or two years of education, but the majority had never attended school and had no exposure to the French language. The Tin Aicha School is a traditional Malian school emphasizing rote learning of classical and theoretical subjects (the *Enseignement Fondamental*) and is taught in French. When it was suggested that this type of education could not help students adapt to their environment and develop skills useful for rural life, several ministries and local authorities agreed that the curriculum should be adapted to meet more of the needs of the local population. Indeed, there was a growing movement within the Malian Government to make school curricula throughout Mali more relevant to rural life. The teachers at Tin Aicha placed an extra emphasis on health topics and nomad history and involved students in agriculture and related activities while awaiting official directives for a fundamental change.

The teachers and agricultural agent requested materials for a rural curriculum and these arrived from the U.N. World Food Program in 1979.

Table VII

RURALIZATION EQUIPMENT PROVIDED TO THE TIN AICHA SCHOOL

Agriculture:	**Animal Husbandry:**
1 plow	40 chickens
1 sowing machine	40 goats
1 sprayer	40 sheep
2 oxen	1 disinfecting pump
4 rakes	
10 watering cans	**Handicrafts:**
200 meters chicken-wire fencing	
5 trowels	100 goatskins
2 pairs clippers	60 skeins thread
16 liters insecticide	
6 kg raticide	

At this point, the garden was moved to the lakeshore, and a teacher trained in rural education worked with students on hoeing and planting. Also, local artisans were hired to teach weaving and leatherwork; their pay and the purchase of new raw materials came from profits from the sale of their products. Students began herding sheep and goats and tending chickens, and the meat and milk from these animals supplied the school canteen.

In 1979, there were not sufficient six- and seven-year-olds to warrant opening a new first grade. Therefore, the *cercle* authorized recruitment of children from neighboring villages to fill the six grades. Some of the children formerly had to travel as much as fifty kilometers to school. The shrinking pool of potential students within the village also led to the recruitment of girls, a new concept for many nomads. The school in 1979 had twelve first grade students from outside the village, and one-third of the student population was female.

The Tin Aicha School was the only school in the *cercle* and one of the few in the country where nomads formed the majority of the students. The rate of matriculation from grade to grade is high and absenteeism is low. At the end of the 1975-76 school year, for example, sixty-nine out of one hundred and nine students attained national average marks despite a measles epidemic and other disruptions. The school remains, according to the annual Government report, one of the best in the *cercle*.

Table VIII
NUMBER OF STUDENTS, TIN AICHA SCHOOL

Academic Year	Grade						Total
	1	2	3	4	5	6	
1975	73*		-	-	-	-	73
1975-1976	42	33	-	-	-	-	75
1976-1977	61	38	39	-	-	-	138
1977-1978	48	43	34	26	-	-	151
1978-1979	47	41	34	24	21	-	167
1979-1980	48	45	58*		20	18	189

*Grades one and two combined in 1975, grades three and four in 1979-80.

From the earliest days of the project, Tin Aichans felt the need for an identifiable religious leader. While valuing the skills of the primary teacher, they requested that a Koranic scholar be assigned to Tin Aicha to teach both children and adults. The AFSC representative supported the request to the Inter-

ministerial Committee, which acted favorably. The *marabout*, as such a person is known in Tamashek, has played a central role in the spiritual life of the residents and in the reaffirmation of their cultural identity.

Functional Literacy

Mali's national functional literacy program began with Bambara, Mali's most widely spoken indigenous language. Other national languages were later incorporated, including Tamashek in 1978. In 1979, a regional office for the program was established in Timbuktu and in December, Tin Aicha hosted the first Tamashek training program in the Sixth Region.

A 1978 visit by literacy program officials had provoked a negative response among most Tin Aichans who saw little advantage in the ability to read and write Tamashek. The language had its own alphabet for the few who wished to use it and Arabic script had been sufficient as a general means of written communication. By 1979, however, views had changed. Fifteen Tin Aichans participated in the two-week training program and found it profitable. Reading and writing remained of minor importance given the lack of a published literature in Tamashek, but arithmetic proved immediately valuable. The fifteen considered two weeks a small investment to make in return for acquiring the ability to add, subtract, multiply, and divide large sums quickly and in Tamashek.

The most successful of the fifteen trainees may be hired to teach in other training courses, but any expansion of the program will be slow. Even the Bambara program, which has existed for some years and enjoys a weekly newspaper and a number of books and pamphlets, often runs ahead of itself and creates a literate population with little of value to read. But the long-term potential of the program in adult education is significant.

Village Government

Tin Aicha has been administered from its founding by village chiefs and councilors elected by the residents annually in a general assembly. Most of these officials represent ethnic and regional groups within the village and most are members of traditionally important families. Change has been infrequent. As in other Malian villages, the chiefs and councilors are responsible for the internal functioning of the village, its relations with neighboring villages, and its links with higher levels of local administration.

Tin Aicha's early relations with the administrative authority

often bypassed the local *arrondissement* and linked directly with the Goundam *cercle*, where the project had been conceived and where its local advisory committee sat. Despite general agreement that Tin Aicha would have to deal solely with the *arrondissement* when the project staff withdrew, development of the necessary working relationship was slow and bumpy. To the *chef d'arrondissement* it appeared that association with the Tin Aicha village would bring him added responsibility without added power.

The institution of new national political systems in 1978 and 1980 gave Tin Aicha increased political status and removed some of the obstacles to the development of village government structures. The nationwide *Union Democratique du Peuple Malien* (UDPM) brought order to the haphazard system of relationships which had existed. The UDPM required monthly meetings, joint action with neighboring villages, and participation in *arrondissement* decision making. Party activity helped to define Tin Aicha as a village, not as a project. The Tin Aicha UDPM committee began with more independence than the village council had ever felt, even though the two are almost identical in membership.

As this report was being written, Tin Aicha was still not an official, Government-recognized village, but moves were underway. Its people remain administratively attached to their former homes. They are members of *fractions*, the nomadic organizational equivalent of villages, and it is through *fractions* that they pay taxes and enjoy Government services. The decision by the UDPM committee in late 1978 to request that the village be made official was not wholly popular. Few people wanted to cut themselves off from their origins by severing their connections to the *fractions*, and all battled a traditional prejudice against villages. They accepted, however, that their life at Tin Aicha could only continue if such a step were taken. Since Tin Aicha exists without a tax base, the *arrondissement* and *cercle* also seek a final definition of the village's status. [Official recognition came in October 1981.—*ed.*]

The administration of the village demands the interaction of a number of popularly elected bodies. The governing bodies of the youth, the women, the cooperative store, the market, and the school work together within a controlled structure that makes each group responsible to *arrondissement* and *cercle* authorities. Each governing body has been identifying its sphere of activity, organizing its constituency, and working for the improvement of its sector. All are moving slowly, but all are

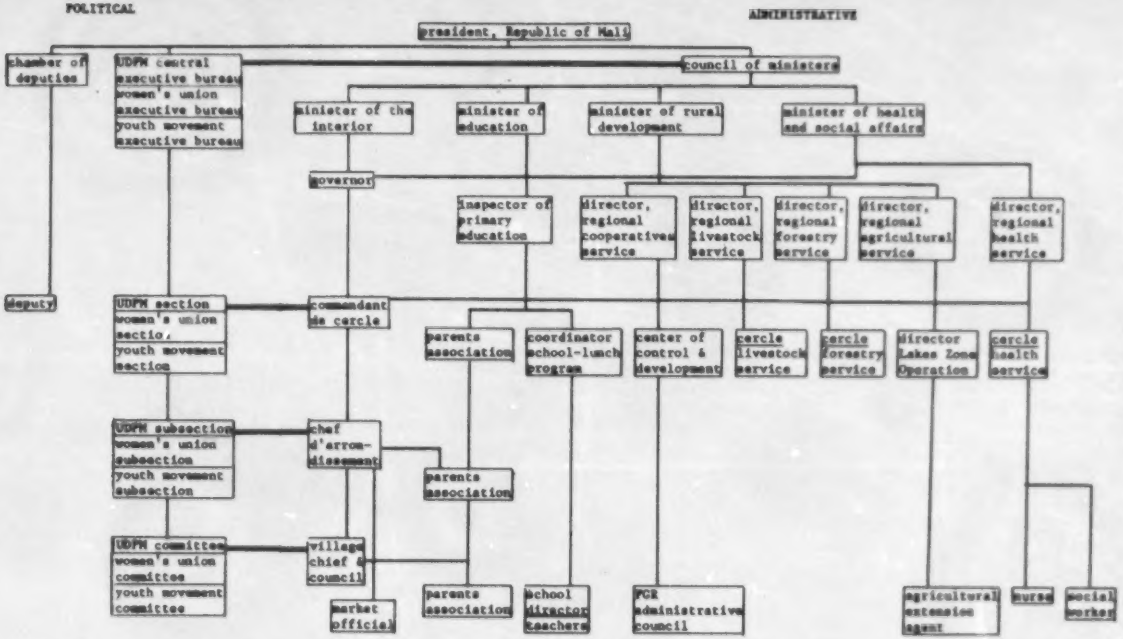


Figure 7
GOVERNMENT ORGANIZATION AND THE TIN AICHA PROJECT

Mali is divided into eight administrative regions (under governors), and these are further divided into cercles (under commandants). The cercles are subdivided into arrondissements (under chefs d'arrondissement) made up of villages and nomad fractions. The village of Tin Aicha is in the arrondissement of Ras el Ma in the cercle of Goundam in the sixth or region of Timbuktu. With the 1979 creation of the UDPM, political units at every level but the region began to work with administrators as partners in government.

BEST COPY AVAILABLE

creating firm foundations.

Weekly Market

In 1976, Tin Aichans suggested establishing a weekly market which would attract traders and goods, provide an outlet for Tin Aicha products, and help integrate Tin Aicha with surrounding communities. A chain of markets around Lake Faguibine allows commerce among several populations: Tamashek and Moor herders, Bella farmers, Bozo fishermen, and Sonrai merchants.

The markets are situated where they are because the Faguibine area is the largest grain-producing area in northern Mali, and draws buyers from as far as 600 kilometers. Transactions are usually in cash, though some individuals barter and even arrange for credit on more expensive items. The markets are most active in the postharvest months of September to December. By January, the more unusual imports begin to disappear, and the only remaining outsiders are salt dealers and livestock buyers. Local commerce continues, however, and the Faguibine population can buy all of its necessities and many of its luxuries throughout the year without leaving the area.

Word of the Tin Aicha market spread slowly, but in April 1978 several important merchants set up simple shelters, and the Tin Aicha Monday Market was entered on the Faguibine merchants' commercial calendar. A wide range of goods arrives at Tin Aicha on Mondays, and the basic staples, when unavailable at the cooperative store, can be obtained from Sonrai merchants. Goods made at Tin Aicha can be sold locally, eliminating the need for costly and time-consuming travel. Transport is available weekly, and news of all sorts—particularly trade news—travels from market to market. The weekly availability of butchers, tailors, dentists, blacksmiths, and potters ensures high standards among their competitors in the permanent Tin Aicha population. Because of the market, the output of perishable goods has risen in the north Faguibine region since more goods can be sold more quickly. Local artisans have increased their markets, outputs, and skills. The Tin Aicha women's cooperatives once sold their dyed cloth and leatherwork through an agent in Goundam; by selling at the Tin Aicha market, they save the cost of the agent's commission. Diets, too, have changed: Tin Aichans now buy fish, nontraditional vegetables, and different spices at the market.

The Tin Aicha market is the youngest and smallest of the lake markets, but it boasts several advantages which have hastened its growth. It is, with the gradual drying of Lake Faguibine, in

Figure 8
Weekly Market Sites

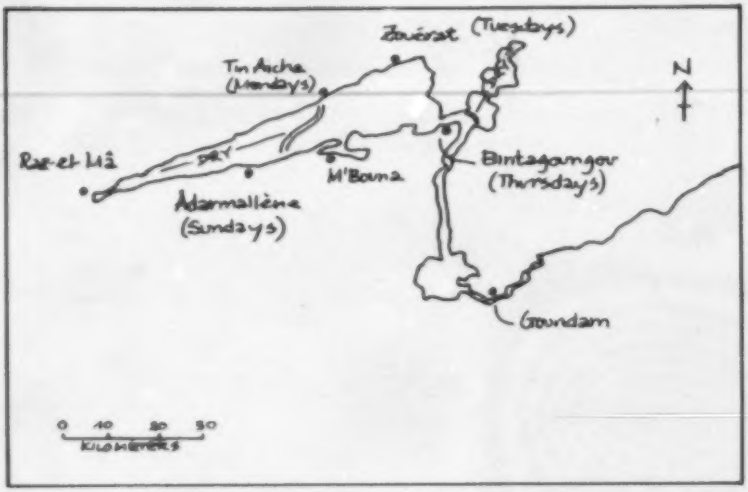
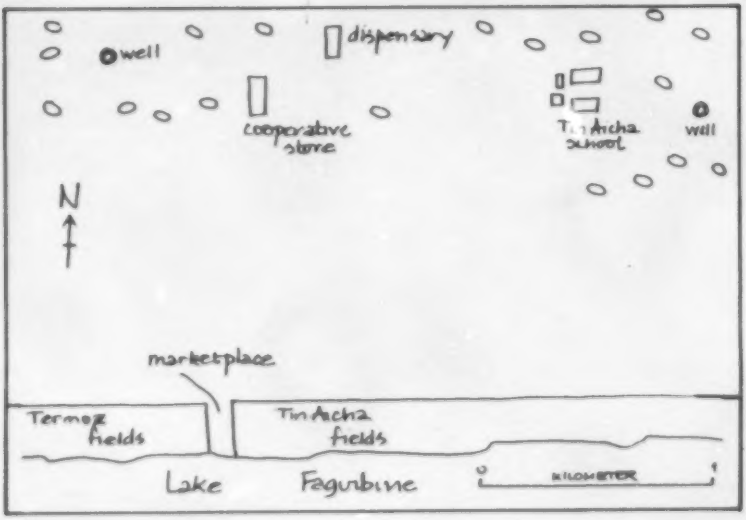


Figure 9
Tin Aicha and Market



BEST COPY AVAILABLE

the center of what is currently the most productive farm area. The market is between two established, important, weekly markets. It occupied, when founded, the westernmost watering point on the lake. This point has moved east with recent shrinking of the lake, but the Tin Aicha wells continue to attract northern herders. In addition, Tin Aicha has the only dispensary, and the only cooperative store on the north shore of the lake.

The market also has changed Tin Aicha's routine on non-market days, since marketgoers often visit the dispensary or shop at the cooperative store, coming before Monday or staying after to do so. One Sonrai merchant has set up permanent shop and supplies Tin Aicha with various goods during the week.

The market's most important functions are economic: new opportunities, increased incomes, better living standards. For the people of Tin Aicha, however, its social impact has been important too: greater interaction and understanding among neighboring villages and camps.

Table IX
SELLERS, TIN AICHA MARKET, JULY/AUGUST 1979

Number of Sellers	Ethnic Group	Sex	Goods for Sale	Residence
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	Bella	Women	Rice	Neighboring villages
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	Moor	Men	Salt, tobacco	Northern nomads
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	Moor	Men	Sheep, goats	Northern nomads
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	Bella	Men	Diverse	Neighboring villages
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	Sonrai	Men	Diverse	Bintagoungou
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	Tamashek	Men	Rice	Tin Aicha
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	Bella	Men	Corn	Neighboring villages
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	Bella	Women	Cooked food	Neighboring villages
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	Bella	Men	Salt, tobacco	Neighboring villages
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	Bambara	Men	Diverse	Goundam
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	Sonrai	Men	Meat	Adarmalene
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	Moor	Men	Cattle	Northern nomads
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	Tamashek	Men	Camels	Northern nomads
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	Bella	Men	Cattle	Adarmalene

Table X

GOODS GENERALLY AVAILABLE, TIN AICHA MARKET

Agricultural Products (Seasonal)	Imported Goods	Local Manufactures	Animal Products
Decorticated rice	Coffee	Calabashes	Milk
Paddy rice	Chocolate	Leather goods	Buttermilk
Millet	Vegetable oil	Woodenware	Fresh butter
Sorghum	Shea butter	Jewelry	Clarified butter
Corn	Candles	Saddlery	Fresh cheese
Cornmeal	Plates and bowls	Cloth	Dried cheese
Couscous	Bottles and containers	Rugs	Eggs
Wheat	Powdered milk	Blankets	Raw meat
Baobab flour	Salt	Charcoal	Cooked meat
Watermelons	Glassware	Soap	Fresh fish
Catawba melons	Matches	Cotton thread	Dried fish
Squashes	Cigarette lighters	Wool thread	Smoked fish
Fresh tomatoes	Perfume	Incense	Wool
Dried tomatoes	Medicines	Metal goods	Untanned hides
Fresh onions	Mirrors	Mats	
Dried onions	Blueing	Medicines	
Okra	Teapots	Tanned hides	
Herbs	Incense	Tannin	
Spices	Envelopes	Ropes	
Sweet potatoes	Combs and brushes	String	
Lettuce	Sunglasses	Baskets	
Cabbage	Hats	Pots	
Carrots	Razors	Hats	
Dates	Dyes	Prepared foods	
Bread	Soap	Dyes	
Jujube flour	Cloth		
Gum arabic	Razor blades		
Beans	Tea		
Peanuts	Sugar		
Peppers	Batteries		
Tobacco	Flashlights		
Seeds	Padlocks		
Cotton	Pins and needles		
	Jewelry		
Livestock	Silver		
	Gold		
Camels	Paper		
Goats	Pens and pencils		
Sheep	Cigarettes		
Donkeys	Mirrors		
Horses	Lamps		
Cattle	Shoes		
Chickens	Ready-made clothing		
Guinea fowl	Thread		
	Spoons		
	Pots and pans		
	Candy		
	Biscuits		
	Watches		
	Radios		
	Tape recorders		
	Tape cassettes		

BEST COPY AVAILABLE

The Cooperative Store (FGR)

Cooperatives in northern Mali have not generally had a history of success. Most were founded in the early 1960s with capital contributed by the local populations; most did not last the decade. In the late 1970s, some were resurrected with Government or other outside funds, but their survival is still uncertain. They face fierce competition from local merchants, they are widely scattered in a region with poor transportation, and they buy their goods from the state trading company (SOMIEX) which is itself sporadically supplied.

Considering such a background, the Tin Aicha cooperative has proved exceptionally successful. It was part of the second wave of support for cooperatives and was financed initially by the AFSC. At the beginning it was housed in a small, straw mat structure, selling tea, sugar, vegetable oil, and other staples at prices only slightly higher than those of SOMIEX. In August 1978, the store became a *Federation des Groupements Ruraux* (FGR) under the aegis of the National Cooperative Service. In September, the storekeeper took a training course in Goundam to improve his buying, selling, and accounting skills and accepted full responsibility for the store.

Cooperative store.

BEST COPY AVAILABLE

The operating capital for the store was first held in Goundam by the financial officer of the *cercle*. When it became an FGR, an elected administrative council from Tin Aicha took control of the operating capital. Net profits from the venture are, of course, the property of the cooperative members—the Tin Aicha population.

The store moved to a brick building with a salesroom and several storerooms in July 1979. Long-term, weatherproof storage made it possible to buy goods in bulk when the prices were favorable, and such goods as sugar and safety matches (ruined by the 1978 rainy season) emerged from the 1979 rainy season intact.

In September 1979, the village decided to invest its profits in grain, which was bought during the harvest season and held until the end of the dry season, when prices for it increase sharply.

The manager and night guard are the store's only salaried employees, although the unpaid administrative council makes the major decisions and verifies the accounts. The manager is also the salesman and the buyer, traveling to the SOMIEX, the Government pharmacy, and the Government grain market in Goundam to purchase goods. His purchases for one year are listed in Table XI. Table XII shows daily sales for two weeks. (Prices are set by the administrative council and reflect the cost of goods, salaries, and transport.)

Table XI
COOPERATIVE'S GOUNDAM PURCHASES
APRIL 1978-MARCH 1979

Merchandise	Quantity	Buying Prices (Malian francs)	Selling Prices (Malian francs)
Soap	**697 bars**	**145-200**	**160-215**
Cotton cloth	120 meters	375	400
Vegetable oil	**112 liters**	**435**	**450**
Tea 4011	109 kg	475-535	500-550
4012	**327.75 kg**	**375-550**	**400-600**
4013	336.75 kg	350-425	400-450
4014	**32 kg**	**350-425**	**375-450**
Rice	3,110 kg	150-160	150-165
Sorghum	**10,320 kg**	**53-67**	**57-75**
Wheat	1,000 kg	110	115
Corn	**6,200 kg**	**57-67**	**60-70**
Tea glasses	12	60	70
Kerosene lamps	**3**	**2,600-2,900**	**2,800-3,000**
Salt	123 blocks	100	125
Mats	**450**	**125-550**	**175-600**

97

Table XI, continued

Merchandise	Quantity	Buying Prices (Malian francs)	Selling Prices (Malian francs)
Cords	**50**	**100**	**125**
Milk powder	120 cans	635-675	675-700
Kerosene	**340 liters**	**225-275**	**230-280**
Instant coffee	5 cans	500	525
Instant cocoa	**96 cans**	**315**	**325**
Batteries	1,174	115-135	120-150
Sugar	**4,560 kg**	**435-500**	**450-550**
Cigarettes	1,690 packs	150-250	175-260
Vitamins	**60 injec**	**70**	**75**
Decongestant 1	32 tubes	625	630
Decongestant 2	**25 tubes**	**595**	**600**
Eye antibiotic	85 tubes	560	565
Antibiotic salve	**55 tubes**	**570**	**575**
Penicillin	469 injec	210-255	215-260
Injec solvent	**160 injec**	**45**	**45**
Decongestant 3	84 pills	1,030/12	1,035/12
Sulfa drug	**1,000 pills**	**40/4**	**45/4**
Antimalarial 1	100 injec	90	100
Antibiotic	**120 pills**	**1,035/12**	**1,040/12**
Fungicide	20 tubes	1,090	1,100
Worm treatment	**108 pills**	**685/12**	**690/12**
Eye drops	7 bottles	590	595
Arthritis salve	**10 tubes**	**805**	**810**
Mercurochrome	10 bottles	255	260
Cough syrup	**1 bottle**	**585**	**590**
Aspirin	1,208 pills	50/4	60/4
Antimalarial 2	**3,000 pills**	**50/4**	**60/4**
Mirrors	25	110	115
Razor blades	**4**	**10**	**10**
Vinegar	12 bottles	160	180

Table XII
DAILY SALES, TIN AICHA STORE
JUNE 17, 1979—JULY 1, 1979

Date	Number of Customers	Goods Sold	Quantities	Total Receipts (Malian francs)
17.6	**36**	**Sugar**	**94 Kg**	
		Batteries	**2**	
		Tea	**8.1 kg**	**47,820**
18.6	62	Sugar	167 kg	
		Milk powder	4 kg	
		Soap	1 bar	
		Cigarettes	6 packs	
		Matches	4 boxes	132,340

98

Table XII, continued

Date	Number of Customers	Goods Sold	Quantities	Total Receipts (Malian francs)
19.6	25	**Tea**	**2.2 kg**	
		Sugar	**37 kg**	
		Milk powder	**3 kg**	
		Kerosene	**1 liter**	
		Soap	**1 bar**	
		Penicillin	**2 injec**	
		Decongestant	**6 pills**	**33,290**
20.6	24	Tea	0.8 kg	
		Sugar	6 kg	
		Batteries	4	
		Rice	196 kg	
		Corn	300 kg	
		Millet	56 kg	
		Cigarettes	3 packs	
		Soap	1 bar	66,045
21.6	23	**Tea**	**1.4 kg**	
		Sugar	**13 kg**	
		Milk powder	**3 kg**	
		Penicillin	**5 injec**	
		Tetracycline salve	**2 tubes**	**17,690**
22.6	18	Tea	0.7 kg	
		Sugar	7 kg	
		Milk powder	1 kg	
		Cigarettes	1 pack	
		Tetracycline salve	1 tube	
		Penicillin	12 injec	
		Matches	1 box	
		Kerosene	1 liter	10,290
23.6	20	**Sugar**	**17 kg**	
		Tea	**1.7 kg**	
		Tetracycline salve	**1 tube**	
		Soap	**2 bars**	**18,440**
24.6	4	Tea	0.7 kg	
		Sugar	3 kg	5,125
26.6	28	**Tea**	**0.8 kg**	
		Sugar	**17 kg**	
		Cigarettes	3 packs	
		Soap	4 bars	
		Batteries	4	
		Matches	4 boxes	14,515

Table XII, continued

Date	Number of Customers	Goods Sold	Quantities	Total Receipts (Malian francs)
27.6	11	**Tea**	**0.5 kg**	
		Penicillin	**12 injec**	
		Antimalarial pills	**24 pills**	5,570
28.6	23	Sugar	20kg	
		Tea	1.4 kg	
		Penicillin	2 injec	
		Milk powder	1 kg	
		Antimalarial pills	4 pills	18,860
29.6	41	**Tea**	**2.4 kg**	
		Sugar	**24 kg**	
		Batteries	**20**	
		Soap	**3 bars**	
		Cigarettes	**2 packs**	
		Matches	**1 box**	16,600
30.6	63	Tea	4 kg	
		Sugar	43 kg	
		Cigarettes	10 packs	
		Batteries	18	
		Matches	5 boxes	
		Sulfa drug pills	20 pills	
		Antimalarial pills	16 pills	
		Soap	3 bars	48,975
1.7	62	**Tea**	**2.6 kg**	
		Sugar	**42 kg**	
		Batteries	**36**	
		Antimalarial pills	**12 pills**	
		Soap	**1 bar**	
		Matches	**3 boxes**	47,350

The thirty-one customers on an average day include sixty-seven per cent Tamashek and fifteen per cent Bella.

The store provides a number of other vital services to the community. With the help of the nurse, it operates a small pharmacy which sells by dose rather than by package when possible. It manages the monthly Government grain allotments to Tin Aicha's civil servants and loans seed money to farmers who repay the cooperative in grain at harvest time. The store also manages the communal field and the livestock cooperative.

These services have developed slowly. Each new venture is examined carefully by a population unwilling to take blind risks. Those which are undertaken can count upon the population's full support.

Permanent Buildings—Construction

The construction of permanent buildings for the school, the dispensary, and the cooperative store dominated the final phase of the project and was responsible for the AFSC's continued involvement after the end of 1977. Construction was not mentioned in the initial project plans because of the uncertainty that Tin Aicha would offer a viable alternative lifestyle for nomads. In the end, the Tin Aichans themselves asked the Malian Government and the AFSC for assurances that the village would indeed be permanent. These mud and fired-brick structures would provide tangible evidence of permanency, eliminate the expense of annually rebuilding with the straw mats, and give a boost to the village economy by creating some temporary jobs and some training in construction skills.

Most building materials had to be transported from great distances; shipping expenses were the most costly items in the construction. Since no transport truck was available for hire, the AFSC purchased a seven-ton, four-wheel-drive truck capable of hauling heavy loads across sand. Most materials had to be brought in: fired bricks from Goundam; palm trunks for the roof struts from stands on the Niger, 200 kilometers south of Tin Aicha; gravel to reinforce the cement floors and foundations from deposits fifty kilometers south and ten kilometers north of the village; louvered steel doors and windows; some cement for masonry and floors; and paint and whitewash from Bamako.

Tin Aichans provided, at standard local prices, the adobe bricks which formed the skeleton of the buildings. They made the bricks in their own fields, using adobe deposits located above the high-water mark on nonarable land. Major sellers hired laborers from surrounding villages, but most of the others worked on a smaller scale with family labor. A local, suitable clay deposit never was found, and most of the facing bricks were eventually imported from Goundam, the regional brickmaking center. A group of Tin Aichan women worked for several months with Goundam brickmakers firing clay bricks for facing.

At that time, the regional public works department at Dire was too busy to become involved in actual construction. Instead, the AFSC representative at Tin Aicha organized and coordinated construction. He made sure that the men and women of Tin

Figure 10
CONSTRUCTION MATERIALS AND COSTS

Materials used:

foundations - adobe brick faced inside & out with fired brick, cement mortar
(adobe bricks 0,40 × 0,20 × 0,10)
(fired bricks 0,20 × 0,10 × 0,05)

walls - adobe brick faced outside with fired brick, cement, inside with cement, whitewashed

floors - cement

doors, windows - louvred, steel, casement (doors 1,20 × 2,0)
windows 1,0 × 1,0

roofs - classrooms, store, I-beams surmounted by palm trunks and then by euphorbia branches, plastered above & below with an adobe-cement mixture, interior whitewashed. Other buildings, because narrower, need no I beams

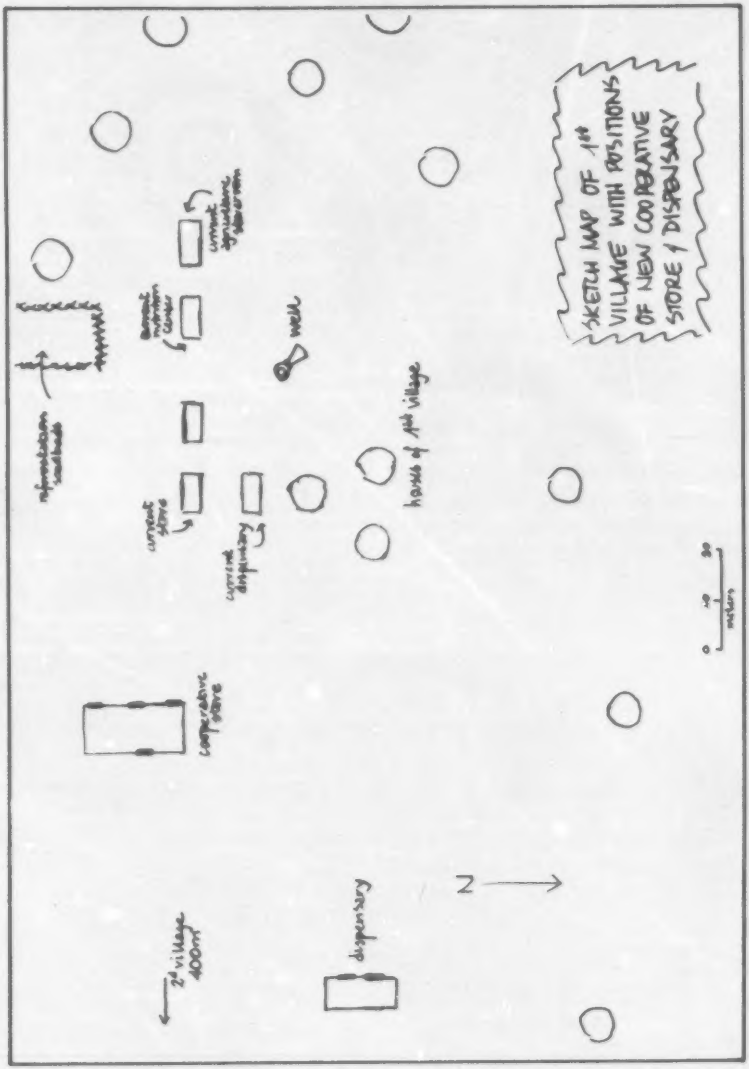
Cost of materials :		
	adobe brick	10 Malian francs/brick
	fired brick	15/brick
	cement	3000-5000/sack
	window	47000/
	door	32000/
	palm trunk	2000
	I-beam	22000/
	whitewash	15 000/barrel

Aicha received priority in the employment opportunities created by this undertaking.

None of the Tin Aichans had training or experience as builders, and the help of outside Malian experts was necessary. Members of the Goundam builders' cooperative moved to Tin Aicha with their families for the duration of the construction. These professionals were aided by Tin Aichan laborers. The village council, assisted by the school director, the nurse, and the AFSC representative, chose the initial work force of twenty-

BEST COPY AVAILABLE

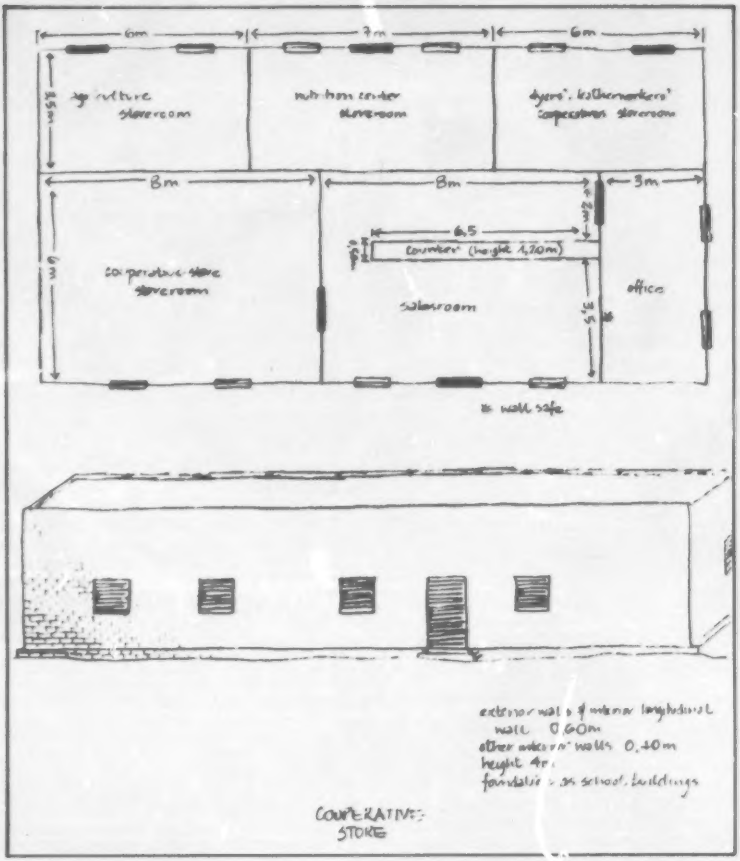
Figure 11a
POSITION OF COOPERATIVE STORE AND DISPENSARY


SKETCH MAP OF 1st VILLAGE WITH POSITIONS OF NEW COOPERATIVE STORE & DISPENSARY
well
houses of 1st village
dispensary
2nd village

five Tin Aichans. Additional labor (a total of fifty laborers when all five work sites were in operation) were drawn by lot from a list compiled by the same commission.

BEST COPY AVAILABLE

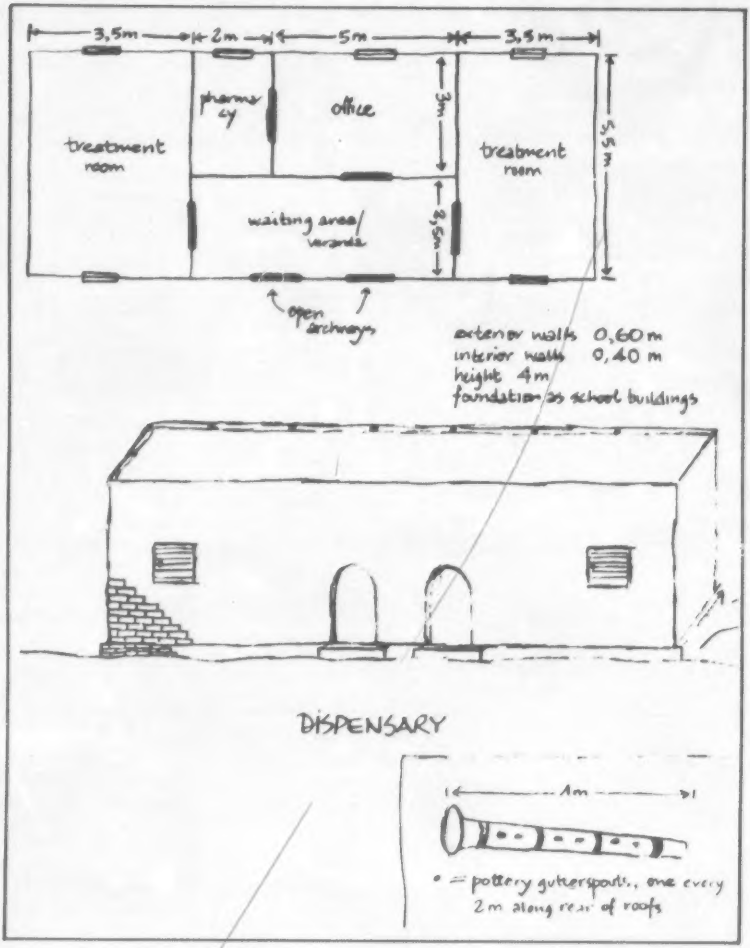
Figure 11b
COOPERATIVE STORE



By early 1980, Tin Aicha's public buildings had been completed. From this construction experience, several local laborers emerged as qualified professional builders. Some local women developed new pot- and brickmaking skills. It gave, for a time, an assured market to local transporters who carried adobe from the lakeshore to the construction sites by donkey and who, by the end of the construction work, had created steady business transporting grain and commodities. The buildings have given Tin Aicha stability and a sense of permanence, ensuring, among other things, a long-term commitment from local administrative services.

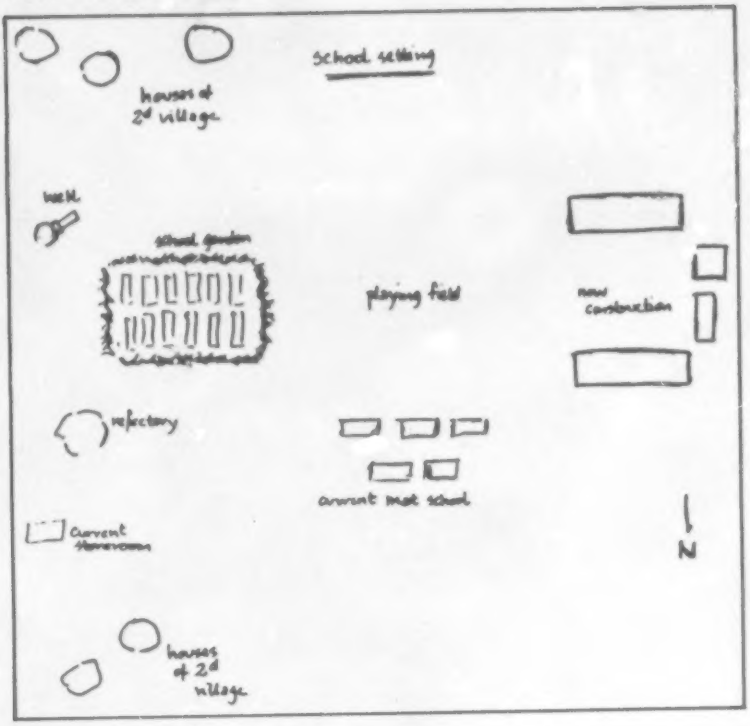
BEST COPY AVAILABLE

Figure 11c
DISPENSARY



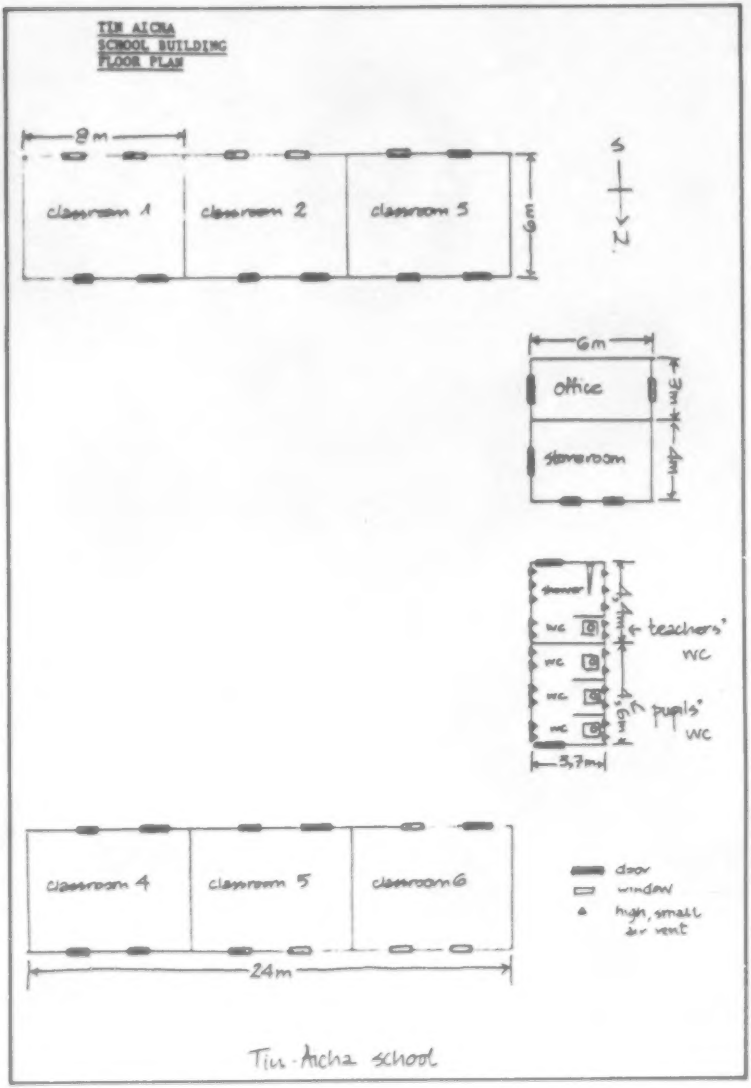
BEST COPY AVAILABLE

Figure 11d
POSITION OF SCHOOL



BEST COPY AVAILABLE

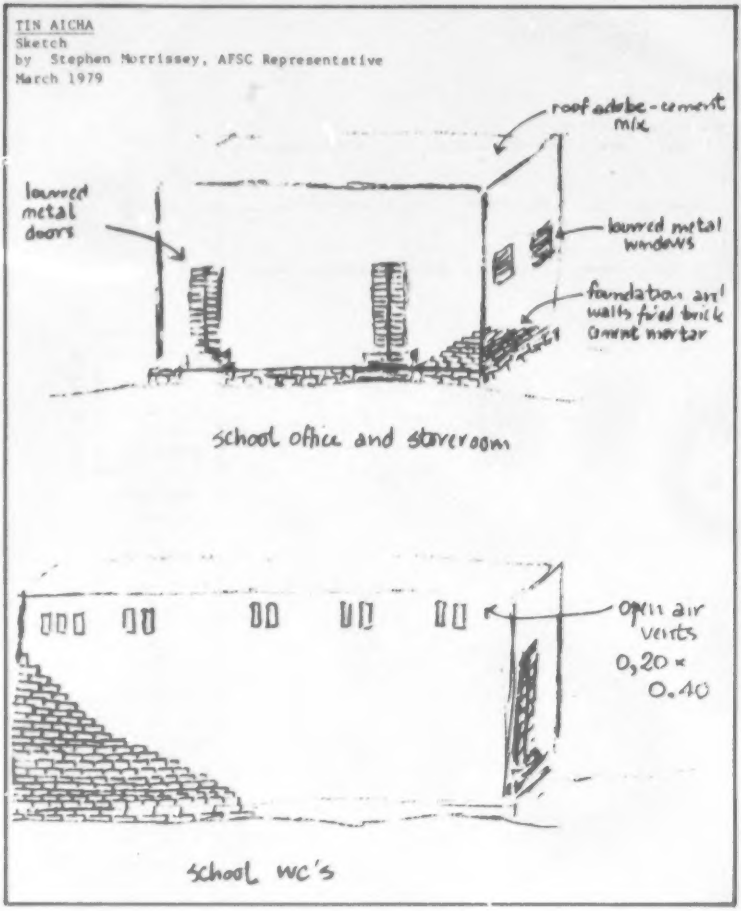
Figure 11e
SCHOOL



Tin-Aicha school

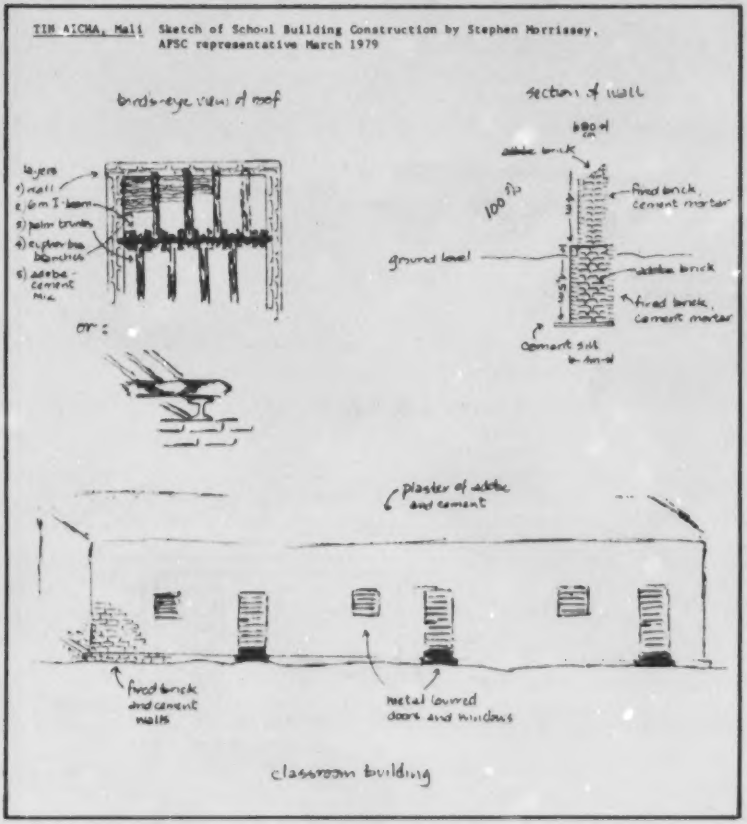
BEST COPY AVAILABLE

Figure 11f
SCHOOL'S AUXILIARY BUILDINGS



108
BEST COPY AVAILABLE

Figure 11g
CLASSROOM BUILDING FLOOR PLAN

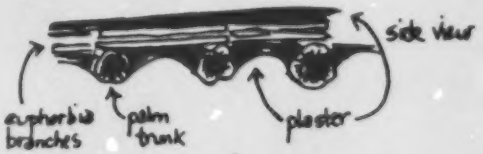


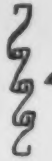
BEST COPY AVAILABLE

Figure 11h
SCHOOL CONSTRUCTION DETAIL

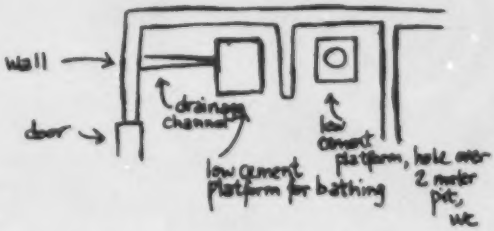
TIN AICHA VILLAGE
Detail of building construction
and school latrines,
prepared by Stephen Morrissey, AFSC Representative
March 1979

another stab at a roof:

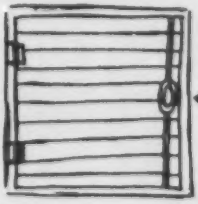




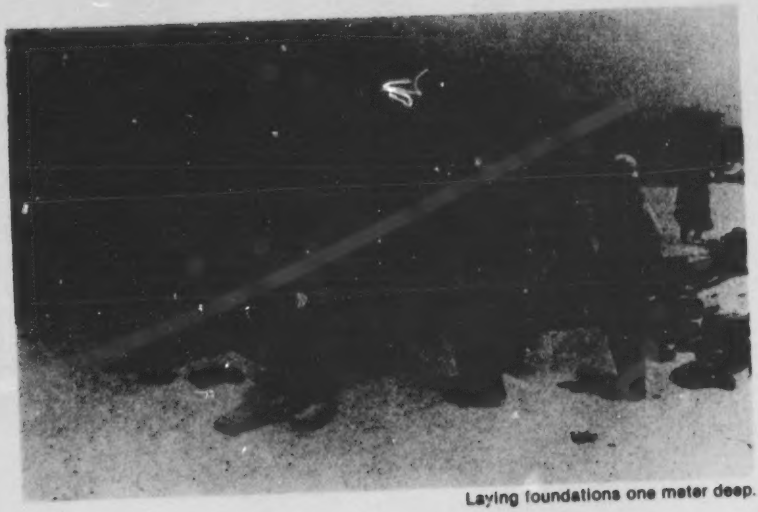
W.C.'s, birds-eye view of a piece:



a window in its frame, from inside building:



BEST COPY AVAILABLE



Laying foundations one meter deep.

Aligning adobe walls.

BEST COPY AVAILABLE

Topping off a classroom building. Some fired brick facing visible.

Sixth grade classroom with teacher and some students.

BEST COPY AVAILABLE

5. ASSESSMENT AND CONCLUSIONS

The Malian Government, the residents of Tin Aicha, and the AFSC all considered the project an experiment, and as such it has been subject to periodic evaluation. Part One of this final chapter, "Evaluation from the Field," is based on field reports by Eva Mysliwiec and Stephen Morrissey. It also includes the observations of two local nomad leaders: Mr. Ambery Ag Rhissa, director of schools for the region, and Mr. Oumarow Ag Mohamed Ibrahim, school director for Tin Aicha. The full texts of the nomad leaders' reports are included in the Appendix. Many examples cited by the evaluators have already been presented in the body of the report; they are repeated here for clarity and to be faithful to the evaluators' original work.

Part Two is the continuation of the profiles presented earlier in the report, commentary from the seven family heads on their experience at Tin Aicha. This will afford the reader some idea of how the residents themselves view the project.

Part Three, "Lessons for AFSC Program Planners," is drawn from discussions in early 1981 held by Philadelphia staff and the Africa Committee, which sets program policy. Tin Aicha reports and evaluations were reviewed, and a number of "Lessons and Conclusions (for Planners)" were noted. The AFSC records this experience in the expectation that the lessons learned will guide planners of other AFSC programs. It is hoped that these lessons also will prove useful to others who are considering ways to cooperate in development projects.

Part I: Evaluation from the Field

All four field evaluators agree that Tin Aicha has offered participants a framework from which to make conscious choices and resources to support those choices. It has enabled a group of nomad drought refugees to regain their dignity and the respect of others, to establish an identity without compromising their cultural values, and to acquire the skills to become self-sufficient. All evaluators agree with a report of the U.N. that stated, "Development can only arise from the heart of each society. It is based on what the human group possesses—its natural environment, its cultural heritage, and the creativity of the men and women who make it up."

The village of Tin Aicha has adopted a farming-herding mix that has generated an undeniable improvement in the economy. Improved health services, agriculture, production, and education have resulted from the contributions and expertise of the project staff and of the villagers. Village initiative has spurred cohesiveness and stability: a mosque, on-going adult education, a youth group. "Part of the process of developing Tin Aicha," said Eva Mysliwiec, "included learning to recognize and deal with stereotypes and racism, building trust and respect, accepting responsibility by shifting power from an administrative level to a village level, and gradually opening minds through communication and dialogue."

Tin Aicha's administrative services, school, and dispensary have made the village a center for all of North Faguibine, nomadic and sedentary, so that the project has had an impact beyond the population of the village.

"We think that faith in success," said Ambery, "is one of the first conditions of success." Certainly the Tin Aichans had that first condition. Even through setbacks, their faith that one day the village would be a success was maintained.

Although all four field evaluators, the nomads, and the Mali Government considered the project to be an overall success, each is able to point to some failures. One of the major shortcomings of the project was seen to be the initial choice of livestock. Others were the methods of purchasing and distributing the livestock, and the low involvement of the nomads in the very early decision-making processes. "The voice of the population was little heard in project design," Stephen Morrissey said, "although project implementation did absorb local opinion." The villagers felt frustrated in the face of practices that they felt to be mistaken, but they would not express these feelings, as this would have been inappropriate, they thought, in light of their great good fortune in receiving the benefits of the project.

Another disadvantage was Tin Aicha's placement: on insufficient land, and isolated from local and district government centers. Tin Aicha farmers said, "The land which we were given would have been sufficient if it had been chosen in fertile areas. But, in fact, the most productive part of the land, the part with the most alluvial soil, is still under water. The same is not true in other areas which we know well along the shores of Lake Faguibine."

Introduction of some changes may have been too rapid, such

as the introduction of new agricultural techniques to people for whom farming itself was a new experience. Project objectives often assumed that Tin Aicha had a typical nomad population, and it does not. Tin Aicha's first residents came from a relief camp, where feelings of dependency and then abandonment were common. "The people live in a different psychological environment," said Ambery. "Others treat them as the 'disaster-struck,' which reminds them of their economic insufficiencies and their days in the welfare camps, where they felt like beggars. Tin Aichans note, however, that 'those who call us refugees do not hesitate to accept our hospitality when they pass by our village.'"

Livestock

As stated, one of the first problems the project encountered was the initial purchase of livestock. In part, this could have been avoided by closer consultation with the recipients of the livestock very early in the project design. "If they had asked our advice, and told us we could not have goats, we would have asked for donkeys for transport instead of ewes," a herdsman said. Not only were sheep in general poorly suited to the harsh environment, but merino sheep, which were selected at first, were considered particularly ill suited to the rigors of desert life.

The choice of animals purchased remains "a debatable point," said Ibrahim. A sheep costs twice as much as a goat, drinks more water, eats more, and is more susceptible to disease than a goat, which can live under almost any conditions. The argument that goats contribute to desertification by eating what little shrubbery is available also has been challenged. The fact that sheep bring in more money when they are sold made little difference to a people who sell their animals only rarely, and not when it can be avoided.

The quality of cattle purchased also has been criticized. Initial purchases included aged and dry cows, and the error was compounded when calves bought to replace them could not reproduce for up to three years, forcing some families to sell them for badly needed cash before they could benefit from any offspring.

As these problems have been pointed out, and as local input has increased, many of the problems have been corrected or overcome. Families granted three cows and three sheep now have twelve cows and fourteen sheep; other families have traded their livestock for donkeys, which they use to transport gum

arabic for trade.

Land

Though the land unfortunately is not fertile enough fully to support the families to whom it is allotted, the people are still more attached to their land than to anything else. "The greatest punishment conceivable is the forfeit of one's land," Ibrahim said. The nomads, who previously considered farming to be demeaning and who put down their tools, pretending just to be passing through when outsiders came into sight, soon reached the point where working the fields was a source of pride. Members of the community worked a demonstration plot started by an agricultural-extension agent, and proceeds from the produce grown in the plot were used to buy agricultural equipment.

Rice and sorghum are Tin Aicha's staple crops. Corn, beans, melons, sweet potatoes, and vegetables are also growing; a few farmers plant cotton and peanuts. Production is mostly for family consumption, although the height of the sorghum and rice harvests brings merchants from fifty miles around.

The School

The school has a food program, which offers three meals a day during the school year. The canteen staff's aim was to get the children used to a varied diet which the villages could maintain at the end of outside financing of the project. Partly through the U.N. World Food Program, which has sent seeds and equipment, the school has set up a garden in which children can learn modern agricultural methods.

The teachers say they would like somewhat better housing and wish that matters could be arranged to allow the school to open on schedule instead of one or two months after the beginning of the school year. The teachers also say the projected annual enrollment does not fit the reality of the village population—the village alone cannot continue to supply the school with enough students. [Subsequently the school was opened to children from outside Tin Aicha.]

The Tin Aicha School has now been in operation for six years, each year bringing the opening of a new class, so that students can now attend up to the sixth grade. The majority of students are nomad children. The fact that the school is located in the village and administered by Tamashek teachers increases parental support for the school in a society that is suspicious of and sometimes hostile to education as "the source of laziness and uselessness," as Ibrahim describes the common sentiment.

Both teachers and students have been praised by the Government Education Service. Parents of sixth graders now favor creation of a middle school that would not remove their children from the village, as attendance at middle school has required in the past. This, too, is an encouraging sign of increased trust in the benefits of education.

Health

According to the chief nurse of the dispensary, the health of the villagers is generally good. Mothers bring their children to the nurse and he says this is a good sign: people are beginning to trust the medical practices of the outside as well as those of their own culture. The most frequent illnesses are bronchitis, malaria, and conjunctivitis, all well known to nomads. "The effectiveness of the treatments that are administered is slowly but surely dissipating people's widespread suspicion of modern medicine," says Ambery. One suggestion by the village population is to have a midwife well versed in traditional as well as modern medicine.

According to Ibrahim, "The dispensary now has new quarters, a solid building with various treatment rooms. The population wishes for nothing further than the continued restocking of this dispensary in medicines."

The Question of Settlement

Despite the areas cited earlier where there was or is room for improvement, the success of Tin Aicha as a project in refugee relief and self-sufficiency is conceded by all evaluators. As Ambery put it, "The citizens of Tin Aicha make no mistake about the advantages they have drawn or will draw from the project. Their faith in its success is clear and unalloyed."

The project's degree of achievement in nomad settlement, or "sedentarization," is open to somewhat more debate and depends to a large extent on the definitions of sedentary and nomadic. Nomads traditionally have had a home base, from which they wander great distances for long periods of time, but to which they always return. Eva Mysliwiec said in 1977 that "It still is not clear whether the nomads will continue to accept Tin Aicha as a viable alternative lifestyle, nor is it so important. It certainly has never been the AFSC's objective." In 1981, it seems clear that most Tin Aichans have accepted their present lifestyle as a viable one, but they would not characterize it as sedentary. According to Stephen Morrissey, "[Sedentarization] is a concept attractive to the Government, which speaks of Tin Aicha as a sedentarization project. It is a concept culturally objectionable

to nomads. Tin Aichans have balanced farming and herding, movement and settlement, as their economic needs and their labor resources allow. The Government calls their success 'sedentarization,' and the nomads do not."

Ibrahim speaks of the necessity of recognizing that Tin Aichans are "subject to the same needs as other Faguibine populations," which require fairly frequent movement. The same needs, however, which render year-round residence for all members of the village impossible also ensure that half the population will be in Tin Aicha at any one time, a percentage that compares well with other local villages.

Ambery suggests that the criticism brought by the people against the project was itself proof of the project's solid foundations. Because the people seem resolved to settle down, they insist on bringing attention to points of the project "where the saddle chafes." Ambery regards the project as proof that it is indeed possible to "settle" nomadic people if they are given the responsibility to become, as Ambery puts it, "authors of their own development."

Part II: Reflections from the Seven Family Heads[1]

Man, 69, Kel Antessar Group

"There was nothing at first; we used up what little grain we had and were about to die; so we begged in the surrounding villages. A year later, we were given animals, but we got no profit from them because they were in the communal herd. We had a little land, but not enough because they had only counted six people in the family when there were seven. The seventh couldn't come because there wasn't enough to eat. I tried to learn farming—my ancestors had had fields here, but they were all lost in the agrarian reform because we weren't present—and grew a little sorghum. The corn failed because the fields were almost completely inundated; the soil wasn't good. Last year was the first good year for the fields, but I was sick and spent the whole season with my son in Timbuktu. The harvest was used to pay the tenant farmers and my debts, the livestock repayment. Even when I am here, I have to pay day-laborers to work the field because I am always sick. Nomads are generally impatient for good things; myself, I only want to see good things in the future. But now I have nothing. I know that one's fortune is set by God. I know that there are people more needy than I am, people who suffered as we did, but who didn't find any

1. Follows order of Profiles, pp. 52-62.

asylum, who didn't get any land. They are much worse off. But one never adapts to famine. So people who leave here are forced to do so by circumstances; it's not that they want to do it. If things are good, people will stay, and others will come."

Man, 44, Bella Group

"We had tried farming a bit in the Gourma between 1969 and 1972. We grew melons and millet along temporary streams during the rainy season. We tried to be farmers and herders at the same time. The drought forced us to do it. Things were bad from 1969 on. Our farming didn't work very well because the streams were very small and water was scarce, but at least we arrived at Tin Aicha knowing something about agriculture. I would still prefer to be a herder. But now we can do both because I have a son and we can take turns working the field and tending the animals. He is the only son who's not in school: all of the others are in school and they are the first in their classes. There were very few Bella in the Goundam camp, only about forty out of several thousand people. They were discouraged from going to Tin Aicha because it was said that they could work. So there are very few here. I don't know why. Because they were able to take care of themselves, they could make do, and they had never had anything. For me, my life is better now, better even than it was before the drought. At least materially. But I am far from my family. Nothing good is ever really good unless you can enjoy it with the whole family, with all of your relatives. But here we have all that we need. I make charcoal, and I sell that and firewood, and my wife is a cook. The children are at school, and they will have a future; they can become teachers."

Man, 49, Kel Taborak Group

"We suffered a great deal at the beginning. There was nothing to eat and Goundam left us completely to ourselves. But then the project started and we began to be able to feed ourselves. And then we got two cows and two sheep. The sheep died, but the cows reproduced, and I had five head at the time of repayment. I've since sold all but one cow, which is about to give birth. I work herding other people's animals and I work other people's donkeys on commission as a transporter. For every forty measures of grain I carry, I get five measures, and if the distance is over five kilometers, I get ten. I also started selling tea and sugar on commission for Bintagoungou merchants who passed by on their way to the market at Adarmalene. I was their agent. Then I convinced them to stop at Tin Aicha, and that is how the

market got started here. I also buy grain on commission for the Bozo fishermen. They leave money with me, and at the harvest I buy grain. When the fishermen return to the lake, I give them back their capital and half of the profit. Because the price of grain keeps going up, it is very profitable. I can do this because everyone knows that I am honest and people are willing to leave their money with me. I think that I can keep making do here; I don't want to return to Goundam."

Man, 72, Imadidarene Group

"We arrived at Tin Aicha and were given fields. The grain was already ripe, ready for harvest. The following year we had to do all the farming ourselves. But the land was nothing compared to the animals we were given. Now the children work the field, which is very small. It produces about three months' supply of grain. This year was very good and it has produced four. The services offered were good because they led to the development of the village, the school, and the dispensary. My son left the school after the third grade. I would have liked him to continue, but he ran away. He ran away from the Goundam camp while we were there, for the same reason. He would rather live by himself in the bush than go to school. What can I do? I am now a herder for myself and for others; I keep their animals. In the rainy season I am in the Daouna, and in the cold season I am around Tin Aicha. In the hot season I move into the lake bed. One son stays all year round in Tin Aicha and the other two are with me, because we have a cattle herd, a sheep and goat herd, and some donkeys, so we must have three people working. Life now isn't as good as it was before the drought because all of the animals don't belong to me, but between my life now and my life in the relief camp, no comparison is possible. We suffered terribly; the food relief ended, there was nothing here, nothing came from Goundam. But now I'm settled around Lake Faguibine, and I'll stay here. The old area around Tacoubao reminds me too much of the suffering."

Man, 60, Moor Group

"I started farming for the first time—my family had never had fields and we had never known anything about grain beyond its price. I started with nine measures (eighteen meters), but I now have only six (twelve meters). I would like more land because now the whole family knows how to farm. The caravan trade was more profitable, but farming is good too; you always have grain. And with a few animals, you can do both farming and herding, at least if you have children, because then you can share

the work. I kept what I was given in the livestock distribution and I now have four cows. I sold a fifth. The sheep I was given all died, but we have the cows. Cows are much more important than fields. We will die with the love of livestock; I prefer one cow to 100 measures of land. We also bought donkeys, and my son goes south to collect gum arabic. He can collect about ten kilograms a day, which is worth 3,000 francs. On his first trip, he bought two donkeys and loads of grain for them, then he came back and sold the grain. I keep working here with the donkeys and he goes south once a year to collect the gum arabic. It is a life we didn't have before. We are well off now."

Woman, 40, Kel Antessar Group

"My husband's brothers were already in the Second Village and they thought that I would get food relief. I thought that I could go and relax, that I wouldn't have to work anymore. But there was no food relief as there had been for the First Village. I stayed anyway because my relatives were here and could help me, and because I got a bit of land, and because I had hopes for the future. I still continue my leatherwork; I spend three or four nights a week in neighboring villages because I have to travel to sell. I got livestock from the project, but I needed money and sold the animals. I've bought a second donkey and five goats and the donkeys still work. I have to farm myself, too, because I have no husband. Because I was already an artisan, I was chosen by the social assistant to learn cloth dyeing. I'm not like the others who refuse to work. Nothing I do here is as lowly as some of the things I had to do at Adarmalene; some of that was practically begging. For me, lowly is having no work at all, having to live off others. The future is in the hands of God. As long as my relatives are here and as long as the civil servants are nomads who can guide us and help us, I shall stay. If that changes, I'll leave. I don't know what I would do. The Farach fields are still dry and I don't even know who would control them if there were water there. They would probably go to my husband's brother, so I wouldn't get any, and, in any case, with Government land reform, who knows who would get them? I would return to my own family in Ber. Many of them have gone to Libya and they want the rest of the family to come. Those who stayed in Ber built up the herd again, but most of the animals died in 1978—it was just like 1972 and 1973—so they are very poor. All of the ex-slaves who herded the animals are gone too. They were dispersed just like the family in 1973. All of the old ties are gone."

Man, 45, Kel Antessar Group

"We were given land and supplies. I worked my own field for the first time, and I still do. I've never hired tenant farmers here. Then we were given livestock. We were indescribably happy. We followed them around for the sheer joy of it. Today my position is better than it's ever been in my life. It is stable. The children are at school, but they are not exiled somewhere else; they are not terrorized by the police. I can follow their lives and I know that they are well fed at the school canteen. And there is also the dispensary; if they are sick, they can get help here and not have to travel a long way."

Photograph by R. Todd Hoffman

BEST COPY AVAILABLE

Photograph by R. Todd Hoffman

BEST COPY AVAILABLE

Part III: Lessons for AFSC Program Planners

The AFSC's entry into Mali at a time when Mali was reluctant to accept help from outside organizations was facilitated by contacts made in the course of international conference programs in Europe and West Africa, which had included more than a dozen Malian participants over a span of many years. In addition, an AFSC population education program had held two conferences in Mali. By 1973, some former seminar participants held important Government posts, including the head of the Ministry of Production, who had visited AFSC headquarters in Philadelphia.

The level of trust that Government authorities in Mali had for the AFSC was further increased when Dr. George Povey, the AFSC representative, carried emergency medicines to the drought area in 1973. Although he took many photographs of malnourished people, he did not publish them. (Other photographers had, causing criticism of the Government for alleged mismanagement of relief efforts.) Instead, George Povey gave the photos to the minister of health, privately, for his own information.

Although the AFSC expended a great deal of effort in developing background knowledge and information on Mali, it had to be willing to proceed with a certain degree of naivete and faith. Even vital information emerged late in the project. Information about patterns of land ownership in Mali, for example, became known only after the land was settled and the project was well under way.

> **Lesson 1. A continued presence in an area through short-term projects and seminars builds up the knowledge and trust that are essential to the successful planning and initial execution of long-term development projects. Even such associations cannot produce all of the key information needed, however, and programs must be planned flexibly and with the faith that they can be adjusted to respond to the real needs that arise as the programs proceed.**

Although the Sahelian drought of the early 1970s itself was a natural phenomenon and the disaster which followed appeared to be a straightforward drought famine, it was in fact at least partly human caused. Droughts in West Africa occur regularly, and over the years the nomads and all Sahelian peoples have evolved methods of surviving them. Development patterns of recent years have made these traditional coping mechanisms

much less effective, however, and as a result this latest drought caused unprecedented famine and death.

Rainfall was adequate in the 1950s and 1960s. Also during that time, new agricultural technology—drilled and cemented wells and animal vaccination—reached the Sahel. Under these favorable circumstances, animal herds increased rapidly. This effect was enhanced by the value systems of the nomadic people, among whom large herds mean security, prestige, and political power. The increase in animal populations led to overgrazing and decrease in vegetation (increase in deforestation). The human population also increased.

In addition, the most fertile land in the region was being used to grow cash crops for export, pushing subsistence farmers to more marginal lands. This in turn pushed nomads even farther north toward the Sahara, and many found it necessary to spend the entire year on pastures which formerly were used only during the wet season. The symbiotic relationship between sedentary farmers and nomadic herdsmen was disrupted, and little attention was given to whether the land occupied by the nomads could support their herds. When the drought came, the region could no longer support the large human and animal population, and the nomads' traditional escape route, to the south, was blocked by new farms and their fences.

The AFSC attempted to address the human suffering by seeking to improve the social structures which human beings use to cope with a crisis, as well as to identify possible technical solutions to meet their needs.

Lesson 2. Rehabilitation of a population following a crisis that includes natural disaster should take into account the human factors exacerbating the crisis, to avoid its repetition.

A simple, urgent need was the AFSC's point of entry in Mali. George Povey's discovery of a population that sought long-term program results similar to the AFSC goals (local initiative and opportunity for their own development), would not have occurred if the AFSC had not had a pressing concern to respond directly to the immediate needs of victims of the Sahelian drought.

While the Philadelphia Office played an important role in general planning and in outlining longer-term program interests, the accomplishment of the aims of the project in Mali

also depended in part upon a fortuitous mix of circumstances and personalities.

In Mali a key person in project design and execution was a regional *commandant* who saw the Tin Aicha Project as a humane solution to the desperate plight of the nomad refugees still in camps in his region. The AFSC had confidence in this person, based partly on the trust George Povey had in him, and agreed to assist him and the project in ways that might strengthen the refugees' potential for self-sufficiency. Long before the AFSC assigned field staff to the project, the regional *commandant* knew some of the ways in which the refugees could be helped. AFSC trust in the judgment of the Malian Government at another level was highlighted by the fact that a project fund established by the AFSC was controlled by the Government's designated Interministerial Committee for the project in the capital.

Lesson 3. The design of a development project should arise from experience in the field. The AFSC could not have planned Tin Aicha from Philadelphia before the project's inception.

In the village it was clear that normal decision-making structures were not functioning at first because of the great ethnic disparity in the group. Also, the group's knowledge of some important aspects of this new life—agriculture, for instance—was extremely limited. Thus, while field staff were sensitive to the need for decisions to be made by the nomads, they also had to live with the apparent paradox of sometimes establishing rules for the nomads to follow.

One rule was that fields left untended for three months would be forfeited; otherwise, project staff believed nomads who were used to traveling for months at a time, and unused to farming, could have neglected a primary source of food and lost the self-sufficiency the project was designed to give them. Another was that families had to work their own fields, rather than hire sharecroppers; in the judgment of project staff, this was a practical necessity for the short term, while the nomads adapted to farming and a semisedentary life. It also reflected an AFSC bias against such a division of labor, especially since it would undoubtedly follow traditional tribal and class lines. Recently, the sharecropping system has come back into limited use, although the stigma once attached by nomads to farming is beginning to fade.

The correctness, in the AFSC's view, of its central concern—for people's involvement in decisions regarding their own future—was underscored by a failure in that regard in the very beginning of the project, when the lack of input by the nomads on a subject with which they were very familiar—livestock—led to expensive mistakes by project planners.

The selection of sheep as appropriate animals for those who could not afford cattle was based on the Government's premise that goats, the other option, contributed to desertification by eating what little shrubbery and foliage there were in the Sahel. Nomad residents of Tin Aicha, who knew perfectly well that sheep would not survive the harsh environment, were not consulted, and they were reluctant to complain in light of their perceived good fortune in receiving any animals at all. Most of the sheep purchased for Tin Aicha did in fact die before leaving any offspring. The selection of cattle also left much to be desired, according to the nomads. Many that were purchased were dry, or too old to calve, and many of the heifers later bought to redress this were too young to produce calves for three years after purchase—not in time to repay the livestock loan as stipulated in the project rules.

Lesson 4. In a development project, the population must be allowed and encouraged to make its own decisions, once its decision-making structures are established and adequate information is available to it. Indigenous authorities must also be respected and supported.

The nomads, the Government, and the AFSC viewed sedentarization in different terms in Tin Aicha. To the nomads, sedentarization was not the issue; Tin Aicha represented a chance to reconstitute their herds and acquire a fertile land base. It was not a project that would require them to develop a new culture and values or give up those they held. The Government of Mali, like other governments, considered settlement of nomads as necessary in order to integrate them into the political and economic structure of the nation. The AFSC viewed Tin Aicha as an experiment to allow the nomads to test an alternative lifestyle in light of new economic and ecological realities. The AFSC saw value in the provision of agricultural land for the nomads, in order to have a food source to complement herding.

In the project, therefore, the aims of the various parties were different, but they were largely parallel or congruent. Although it was important for each party to define its aims and approach,

this was especially important for the AFSC, as the complete outsider. Consistent, repeated statements of aims and frame of reference to all concerned parties made for openness and trust, and ensured that the Government and the nomads would not be taken by surprise by an AFSC "hidden agenda" later in the project.

Lesson 5. Goals for development projects will probably always be different for the different participants involved; even so, overlapping or generally consistent objectives can result in a successful project; for the outsider, openness and consistency in regard to motivation and aims is a strength for the project as a whole.

There was sincere desire on all sides to promote self-reliance through the Tin Aicha Project; yet substantial AFSC and Government support was essential to the success and permanence of the project. Technical skill and material assistance contributed by project staff demonstrated a commitment to the project which heightened the confidence of the residents. Practical assistance also helped to ensure the village's survival.

Because the nomads who settled at Tin Aicha were initially desperate, assistance was required for all of their food, housing, health, and educational needs during the early phase of the project. The AFSC provided substantial amounts of money, a resident representative, and administrative support which extended for five years. Of particular importance were the mobility, objectivity, and advocacy of the AFSC representative, whose role as an informed, trustworthy intermediary is believed to have been indispensable to the project. The Government provided equally indispensable resident educational and technical staff, food and medical supplies, and high level supervision, though the latter two were considerably diminished in the last two years of the project.

Eventually, as Tin Aicha's resources increased, residents rightly came to expect Government services as a village entitlement. At that point, technical support and education were no longer gifts, or viewed as such, but were services received on the same basis as they were by other villages. Tin Aicha began to see itself as a permanent entity.

Lesson 6. A totally destitute population cannot become self-sustaining without massive intervention, even at the risk of perpetuating excessive dependence. A delicate

balance must be struck between self-reliance and adequate levels of technical and material assistance over time.

Tin Aicha was established with the support and guidance of an Interministerial Committee based in the capital, Bamako. This support at the national level was essential to start the project, but it soon became evident that such high level attention normally could not be given to so small a subdivision, and that day-to-day support was required from local administrative and technical staff in the Sixth Region. The shift from national to regional supervision was fully accomplished when the first phase of the project was complete and two villages were established; then the Interministerial Committee was laid down. This shift coincided with the rotation of AFSC personnel, but not through specific design.

During the second and final phase of AFSC association with the project, a concerted effort was made by both AFSC and village leaders to strengthen Tin Aicha's village council and to establish direct ties between it and local *(arrondissement)* and regional *(cercle)* officials. In 1980, when elections were held, some Tin Aicha residents were elected to local and regional offices. Such political involvement is unusual for nomads, and the full implications may not be apparent for many years to come.

The Tin Aicha village council is now seeking official status for Tin Aicha as a nomad village which will pay taxes locally. (Up to this time, all residents have paid taxes to their former clan leaders.) As the territory of an official village, the land of Tin Aicha will remain under the jurisdiction of the village council.

Lesson 7. To have a chance for permanent survival, an integrated development project for a given population requires eventual integration into local structures, after the pattern of other such settlements.

Tin Aicha was started as a pilot project. The Government and the AFSC hoped that it could be duplicated in other parts of Mali if successful. Considering the scarcity of additional fertile land, however, duplication has proved impossible, and costs make replicability questionable in any case. Also, the Tin Aicha population was available for the project only as a group with absolutely no alternatives after losing everything in a severe and prolonged disaster; only another disaster could make such a population available again.

Aspects of the program can serve and have served as models, however. Other nomads, not only in Mali but also in neighboring Niger and other Sahelian states, have looked at Tin Aicha carefully, and with some approval. They have seen that their way of life can be modified without necessarily destroying their pastoral, nomadic, cultural values. They have seen that farming can be undertaken without loss of dignity or independence and that formal education need not mean the loss of family and clan values or prolonged separtion from children. They have come to see some value in official government systems and the services they can provide such as health, education, agricultural assistance, and veterinary medicine. The other nomads have seen that settlement in the Tin Aicha mode need not be onerous or a denial of their traditional lifestyle.

Because of Tin Aicha, the AFSC has been asked by both the Government and nomad leaders to join in small, diverse projects in Mali to find ways of increasing options and strengthening self-reliance for nomadic peoples. Tin Aicha's lessons will be valuable in establishing these new projects.

Lesson 8. A project that cannot be precisely duplicated may still contain valuable replicable aspects and have a significant multiplier effect.

The first settlers of Tin Aicha were among the last refugees in their refugee camp in Goundam. Others who had any options or resources whatsoever had already left. The first Tin Aichans were among the poorest, most malnourished, ill clothed, and unhealthy refugees created by the Sahelian drought. They were totally destitute, with no animals and no extended family on the outside to help them.

In addition, their leadership structures were broken. They were peoples of different races, languages, and cultures, and they felt like beggars because their only chance for life seemed to be to accept charity. Racial tensions ran high. Yet the settlers of Tin Aicha were able to rise above desperate circumstances, cultural and ethnic diversity, and total disorganization to forge a new life, in a new village, with new leaders, in harmony with their old traditions.

Lesson 9. Even the most desperate of dispossessed people retain extraordinary strength, adaptability, and ingenuity. Outside assistance must be designed in full awareness of that fact and be provided in ways that call it forth rather than impede its realization.

The AFSC is aware that the Tin Aicha experiment is still in progress, and that its appearance of relative success must be judged over a greater span of time. It would be important that the current evaluation be followed up in perhaps five years' time with another evaluation. This evaluation especially should study the social and economic patterns that have emerged in the population, assess whether there has been a reversion to previous caste and class structures. Other important subjects for evaluation would include the division of labor, patterns of education, literacy, and numeracy, the political standing of the village and its people, and the status of women. Perhaps only through such an evaluation will the true impact of the Tin Aicha experiment fully be measured.

***

In the conclusion to her report, Eva Mysliwiec said, "A review can never convey adequately the significance of the roles and the contributions of the Malians whose guidance, understanding, patience, and support were a continuous source of inspiration and hope to Tin Aicha. Neither does it do justice to the people who *are* Tin Aicha and from whose courage, humility, warmth, and sense of humor I shall never recover, or wish to."

120

Photograph by R. Todd Hoffman

BEST COPY AVAILABLE

Photograph by R. Todd Hoffman

122

The previous numbered page in the original document was blank.

BEST COPY AVAILABLE

APPENDIX

The previous numbered page in the original document was blank.

GUIDE TO THE APPENDICES

A. CHRONOLOGY 141

B. TIN AICHA REVIEW 145
by Ambery ag Rhissa

C. A LOCAL VIEW OF TIN AICHA IN 1980 201
by Oumarou ag Mohamed Ibrahim

D. WELCOMING ADDRESS for AFSC EXECUTIVE SECRETARY 207

E. SEMINAR REPORT 209

F. FINANCIAL SUMMARY 231

The previous numbered page in the original document was blank.

CHRONOLOGY

1968-1974	Drought Years
June-July, 1973	First Povey trip to Mali for delivery of medicines
1974	
June	Povey project exploration in Mali
September	Povey return visit to Mali to discuss project details
October	Letter of invitation from Mali Government for AFSC participation in Lake Faguibine project
November	Signing of AFSC - Mali Government Agreement
December	Field trip by Susan Smith Gunn, AFSC National Office staff, to arrange for implementation of project
1975	
February	Arrival in Mali of AFSC field representative Eva Mysliwiec Interministerial Meeting, Bamako — implementation strategy AFSC field representative sets up residence in Goundam
April	Village Council elections; election of village chief
May	Opening of school classes — Grades one and two
June	Completion of Tin Aicha well; beginning of nutrition center and garden and a mini-cooperative Inauguration of Tin Aicha Village — visit of Interministerial Committee
October	First Tin Aicha rice harvest Second election for village chief Opening third grade
November	Interministerial Meeting, Bamako — Evaluation of first phase of project
December	Departure from Goundam of Captain Kibily Demba Diallo. Arrival of his successor, Captain Soumana Traore Arrival at Tin Aicha of Arabic-Koranic teacher Settlement of second group of 100 families

The previous numbered page in the original document was blank.

1976	
March	AFSC International Dialogue on Role of Nomads in Development — Haoussa-Foulane, (see Appendix for complete report)
September	Visit to Tin Aicha—Interministerial Committee Distribution of livestock to Second Village
October	Opening of fourth grade at Tin Aicha Interministerial Meeting, Bamako — Decision not to establish Third Village; modification of original plan
December	Beginning of reforestation program
1977	
July	Beginning of Tin Aicha Review by Ambery Ag Rhissa (see Appendix for complete text)
October	Interministerial Meeting, Bamako
1978	
January	Visit to Mali by AFSC executive secretary (see Appendix for text of Welcoming Address) Malian Government assumes responsibility for Tin Aicha dispensary
February	Arrival in Mali of Stephen Morrissey, AFSC field representative
March	Interministerial Committee visit to Tin Aicha Departure from Mali of Eva Mysliwiec Departure from Goundam of *Commandant* Soumana Traore; arrival of his successor, Captain Louis Camara
April	Tin Aicha cooperative store opens small pharmacy School-ruralization supplies requested from World Food Program
May	Meeting of Interministerial Committee, Bamako — Acceptance of village livestock-repayment plan
July	Permanent structures erected at Tin Aicha market
August	Tin Aicha cooperative store's first administrative council elected; cooperative becomes a *Federation des Groupements Ruraux* under Government Cooperatives Service
September	Livestock repayment begins Cooperative-store manager takes Government training course in Goundam
October	Fifth grade opens at Tin Aicha School; school lunch program taken over by Malian Government

	Village council takes title to Tin Aicha's fields
	Brickmaking begins for construction
December	Construction of permanent buildings begins
	Official market supervisor appointed for Tin Aicha market
	Cercle-wide *Union Democratique du Peuple Malien* elections; Tin Aicha Committee takes over administration of village from village council
1979	
January	Tin Aicha women begin making fired bricks for construction
	Women's cooperatives (leathermaking, tie dying, rug weaving) begin selling at a Bamako outlet
April	Livestock cooperative established
	Ruralization equipment arrives at Tin Aicha School
June	New school buildings completed
August	Parent-Teacher Association created
October	Sixth grade opens at Tin Aicha School: in new buildings
	FGR begins buying grain to assure low prices in dry season
December	First Tamashek literacy training program in Mali held at Tin Aicha
	National youth movement elections in Tin Aicha
1980	
January	Tin Aicha social worker to Markala Women's Center for training in soapmaking
February	Cooperatives' building and dispensary completed
	Construction of staff housing begins
June	Graduation of first Tin Aicha class
	Election of national women's movement branch, Tin Aicha
December	Termination of AFSC's fiscal involvement in Tin Aicha

TIN AICHA REVIEW
An Historical and Cultural Assessment (1977)

By Ambery ag Rhissa
(Translated from the French)

Ambery ag Rhissa is an educator of Tuareg origin and was director of secondary education in Goundam when he wrote this document. More recently he has been appointed the director of adult literacy programs (Tamashek and Sonrai languages) in the Region of Gao.

The American Friends Service Committee asked Ambery ag Rhissa to undertake this study and critique because of his familiarity with the project. He has visited Tin Aicha frequently, is well known to most of the villagers, and is held in great respect. His background, professional training, and experience allowed him to contribute a valuable non-AFSC assessment of the first three years of the project. He spent several days at Tin Aicha in July 1977 to interview its residents; the study was completed in September 1977, three years before the project concluded.

The previous numbered page in the original document was blank.

CONTENTS

1. INTRODUCTION	149
2. PROJECT AGREEMENT	149
3. FRAMEWORK OF THE PROJECT	151
A. *Cercle* of Goundam	151
B. The People	154
C. Economy of the *Cercle* of Goundam	161
D. Communications Infrastructure	166
E. Historical Background	167
4. TIN AICHA	171
A. Historical Background	171
B. Geography—Project Site	173
C. Population	174
D. Organization	176
E. Staffing and Results of Service	178
1. Agriculture	179
2. Livestock Raising	182
3. Teaching	186
4. Health and Health Education	188
5. Other Results	191
a. The Cooperative Store	191
b. Reforestation	191
5. TIN AICHA SEEN...BY TIN AICHA	192
6. CONCLUSION	196

The previous numbered page in the original document was blank.

1. INTRODUCTION

The Tin Aicha Project grew out of cooperation between the Government of Mali and the American Friends Service Committee (AFSC), a nongovernmental organization better known in Mali by the name *Service Quaker*. Its purpose was the rehabilitation of 100 families of nomadic herding people after the closing of the disaster relief camps in May 1974.

For the AFSC, this was an opportunity to bring help to needy people and to assist them in moving forward a bit from their ancestral lifestyle. For the Mali Government, the project provided an opportunity to experiment with methods for the sedentarization of nomad people, a problem with which it has been concerned for a long time.

At the outset, the project involved granting plots of land to 100 volunteer families at the time of the abrupt closing of the refugee camps, so that they would not return to the same state of deprivation they had known during the great drought of 1968-1974. However, in the course of their preliminary discussions, Captain Kibily Demba Diallo, then *commandant* or administrative officer of the *cercle* of Goundam, and Dr. George Povey (AFSC consultant) conceived the idea of also granting livestock to each family to help them discover the complementary value of agriculture and animal husbandry. This notion matured into the final project which the Mali Government adopted as its own on October 1, 1974. By that date, 100 volunteer families were already settled at Tin Aicha. Each family had a field, already sown with crops, which it tended thereafter until harvest time—September-October. It should be noted that these fields had been taken out of land officially classified as "available" in the registry of the local government—i.e., land not yet parcelled out by the administration, although it was, in fact, being regularly farmed. As of July 1974, there were 500 hectares in all for the 100 families, more than 500 people.

2. PROJECT AGREEMENT

Prior to signature of the final project, Mali and the AFSC agreed on the following general points:

A. AFSC would furnish financing worth twenty-five million Malian francs for a period of three years. This financing was to cover the purchase of livestock—200 heifers and 200 sheep, annual maximum, plus eight bulls and ten rams. It was also to cover:

operating material

travel expenses for project staff

130 The previous numbered page in the original document was blank

purchase of medicine
purchase of seeds
purchase of school equipment

B. The Malian Government would supply the following staff and pay their salaries:

one agricultural-extension agent
one nurse
one school teacher
one social worker
one livestock-extension agent

At first, it had been planned to give each family one heifer, one sheep, and five hectares of land. Subsequently, taking into account the different sizes of families, this formula was readjusted to: one *soumboy*[1] for each family member, one to three heifers, and one to three sheep per family, depending upon family size.

Once these points were established, the goals of the project became much clearer to those responsible for its conception. It gradually became clear that the aim was not simply to enable these nomad people to engage simultaneously in farming and animal husbandry. Rather, it was hoped that a new sort of village would arise out of Tin Aicha: a village whose principal impulse would be to change the attitude of the population; a village which, on the strength of its own initiative and with the support of temporary outside help, would learn to direct its own affairs and to produce enough for consumption and exchange.

The animals were distributed to the families with the clear understanding that they would have to repay this loan after four years of use. The repayments were to constitute a sort of "revolving fund" of livestock which would serve to endow subsequent groups of 100 families.

Two interdependent organizations developed for planning and oversight:

1) An Interministerial Committee in Bamako, on which were represented:

the Department of the Interior, Defense, and Security
the Department of Rural Development (livestock and agriculture)
the Department of Education
the Department of Health and Social Welfare
the representative of AFSC
the *commandant de cercle* of Goundam

This committee was responsible for overall coordination of the project and essentially played a policy-making role and was scheduled to meet annually.

---

1. A local measure of land equal to two meters.

2) A Coordinating Committee at the regional level in Goundam, which consisted of:

the *commandant de cercle* of Goundam

the representative of AFSC

the director of the Lakes Zone Operation, a Government agricultural enterprise responsible for agricultural development around the large lakes which border the Niger River

the inspector of primary school education or his representative

the head physician of the health center in Goundam

the budget director for the *cercle* of Goundam

This committee concerned itself with the daily problems of the project and had mainly an administrative and executive role. In theory, it met once a month.

3. FRAMEWORK OF THE PROJECT

Let us now take a brief look at the socio-economic and socio-historic context into which the Tin Aicha Project has fit.

A. *Cercle* of Goundam

The geographic area of the project is situated at the western border of the Sixth Region of Mali, which is generally known as the Region of Gao. The Gao Region has recently been divided into two sections. The *cercle* of Goundam stretches from 16 to 20 degrees north and from 3 degrees 20 minutes to 6 degrees west. It covers an area of 92,688 square kilometers and lies entirely on the left bank of the Niger River in the Sahelo-Saharan climatic zone. In the north, it is bordered by the Islamic Republic of Mauritania and the Administrative Region of Timbuktu; in the east, by the Region of Timbuktu and Dire; in the south, by the Regions of Dire and Niafunke; and in the west, once again by the Islamic Republic of Mauritania. The topography is almost uniform: dunes of fine sand which move from northeast to southwest in sometimes quite noticeable fashion.

This uniform landscape is interrupted only by a few mountains (Farach, Bankor, Bankorey, Fati, Horo) and by the large lakes which lie near them (Gouber, Kamongo, Faguibine, Fati, Horo). The vegetation consists principally of shrubs with a herbaceous ground cover, mostly *takana* (Tamashek for *Cenchrus biflorus Roxb*), a prickly grass which is known locally as a *cram-cram* and which is considered by geographers to mark the southern limit of the Sahara. The trees are mostly *Acacia raddiana* (*ahaks* in Tamashek), whose leaves and pods are excellent feed for camels and goats. These *acacias* are much more stunted than those of the northernmost area of the Region of Gao, especially from the eighteenth parallel on. The land also grows numerous *Euphorbias*—cactuslike plants—which prefer fixed dunes or those consisting of a sand

less fine and loose than the moving dunes of pure silica. These resistant plants are not of much use to cattle, but they do form a plant cover that breaks the monotony of the sand. In rarer instances, one finds *teshak (Salvadora persica)*, a perennial with edible fruit, whose wood serves in the manufacture of toothpicks; *taborak (Balanites aegyptiaca)*, the stems of which are made into various household articles; and *atjar (Boscia agustifolia)*, which has edible pods.

Outside the lake area, the ground is mostly silicous with occasional small plateaus of gravel which are generally located near former rivers or lake beds (Daouna, Romi, Tagheshit, for instance). The lakes have an alluvial clay bottom. Agriculture is concentrated in the valleys formed by these lakes. They have become a magnet for nearly all the farmers of the region.

The climate of the *cercle* of Goundam is the same as that of the Sixth Region of Mali: dry and arid. There are two principal seasons during the year: a three-month rainy season (July to September) and a nine-month dry season (October to June). Occasionally, the rainy season (called the *hivernage*), will extend from June to October. It is a period of regeneration and relief. The rainy season brings water to farmers' fields and green pasture and nourishment to the nomads' herds. The animals can recuperate with sufficient water and green grass; the nomads can rest after a long period of bitter struggle to draw sufficient water for their families and herds. The abundance of milk tempers, for a time, their need to buy grains and other foods at the market. On the other hand, the sedentary farmers, who are at the beginning of a new agricultural year, must buy grain from state or private warehouses, unless they have built up large reserves during the previous growing season. For them, the period from June to August, generally called the "stopgap" season, is one of hard work and penury.

The dry season consists of a cold and a warm period. The cold period lasts from November to February with the lowest temperatures generally in December and January. Though there are no official weather stations, temperatures are known to fall to two degrees centigrade in December-January, especially in the North. This is the season when animals can go without drinking for a long time, especially north of Lake Faguibine, for they lose little water from their bodies and can find moist green pasture right through the month of March. This "forced fasting" is common practice with goats, sheep, and camels. Milk production is sufficient in this season, and people's appetites are greater with their need for more calories to maintain a thermal equilibrium. Generally by the beginning of the cold season, every herding family or group of families has already planned its migratory route for the hard times of the year which are to come: April to June.

Compared to its neighbor, Timbuktu, the *cercle* of Goundam has generally favorable rainfall. Nevertheless the rain is not well distributed, with some zones getting more rain than they need and others less. The harvests, the pastures, and the animals themselves

naturally depend on this rainfall. As soon as the rains start, the grain begins to grow, and the ponds fill with water, allowing the nomad to herd his livestock where he will. In Goundam, 143.5 millimeters of rain fell in 1976, with a maximum of 87 millimeters in the month of August.

The *cercle* relies mostly on its wells and its lakes to meet its daily water needs. The wells are not numerous but very deep. Some reach eighty meters. The necessity of digging so deep has doubtless kept down the number of wells, except in the immediate environs of the lakes. Many of the wells have such briny water that they can be used only for animals, but their existence enables the nomads to water their cattle, donkeys, camels, and sheep during the worst of the hot season particularly. Water is drawn from these deep wells by animal power with the aid of wooden pulleys. The yield is generally quite good. Their upkeep is difficult and problematic because they often have to be dug out when the wind or ropes dragging on the ground have filled them with dung or other debris. The pulleys are mounted on forks, each belonging to a single family or to a group of families. In general, the number of forks around a well indicates the water capacity of the well. In some cases, if there is a greater concentration of cattle or if the water level sinks, the well must be worked twenty-four hours a day in shifts.

Some nomads always stay in the vicinity of the lakes in order to water their stock. These animals usually have different eating habits and a different watering rhythm than those which are watered from wells. Near the lake, the animals can drink every day and do not normally have to walk long distances. This is not the case near the wells, where the rhythm depends on the physical limits of man and beast, on the distances to be covered, on the capacity of the well, and on the concentration of animals in the area.

Among the lakes of the region, we should take particular note of Lake Horo, Lake Fati, Lake Tele, and Lake Faguibine.

The Lake Horo area is now in the process of being developed by the "Lakes Zone Operation." It is fed by a canal from the Niger River at Tonka. It covers about 30,000 hectares. Lake Fati is fed by a branch of the Niger starting at Tin Dirma, between Tonka and Dire. Sorghum, millet, rice, and corn are farmed there.

The other lakes (Tele, Faguibine, Gouber, Kamongo) form a chain fed by the same branch of the river which passes near Goundam. Lake Gouber and Lake Kamongo are dry at present. Lake Tele receives water only during the flood season: August to March. The Goundam population grows sorghum, rice, corn, millet, potatoes, and peanuts on its shores. The lakeshore land is sometimes a subject of conflict and litigation between farmers and nomads, as the latter bring their animals there for pasturage.

Faguibine is probably the largest lake in Mali, after Lake Debo. It forms a great isosceles triangle, oriented east to west and measuring about eighty kilometers on the sides and twenty along its base—in all, a surface of about 80,000 hectares. Four of the eight *arrondissements*

(districts) which make up the *cercle* of Goundam are situated around it: Bintagoungou, Farach, Gargando, and Raz el Ma. All four *arrondissements* are vitally interested in the lake because all four have cultivable land along its shores.

Lake Faguibine is a little special and mysterious because of its cyclical water levels. According to local people, it takes fifteen years for the lake to go from its lowest to its highest level. In 1941, the lake was dry. In 1956, it was full. Now it is in a period of gradual depletion. When the whole basin is empty of water, hot multicolored gases rise from deep fissures. These have never been analyzed, to our knowledge. The periods of flood and high water are very dramatic.

At the absolute low point, soil humidity is insufficient for agriculture. At the high-water level, the fertile alluvial and clay soil is all submerged under water, leaving only sandy banks on which very little can be cultivated.

In response to these fluctuations, there is a gradual movement of the population, who tend to follow the retreating water, to stay near the moist and fertile soil until it disappears altogether. So a sort of human tide follows the natural one.

B. The People

Approximately 105,000 people live in this briefly described geographic area of 92,688 square kilometers, which gives a population density of about one person per square kilometer (two times less than the mean density of Mali).

This population includes the Sonrai, a people of mixed racial origins who are essentially farmers, and the Tuaregs, Moors, and Fulani, who are mostly nomadic herders.

The Sonrai are sedentary and live in villages, of which the most important are: Goundam, Tonka, Bintagoungou, M'Bouna, Douekire. They farm the banks of Lakes Faguibine, Tele, Fati, and Horo. Some among them, frequently members of the lower caste, are weavers, but most raise livestock, especially cattle. With slight variations, they speak a dialect of the Sonrai language similar to that spoken in the *cercles* of Timbuktu, Dire, and Niafunke.

Sonrai society is rather hierarchical. At the top of the pyramid are the nobles, generally Arma people, who are descendants of the Moroccan mercenaries who occupied the upper loop of the Niger River in the sixteenth century. Under them are the Ga-bibis, who seem to represent the original Sonrai population which was put in the position of a powerless minority by the Arma after the Moroccan occupation. From that time on, the Arma enjoyed a degree of supremacy in the region. After the Ga-bibis come the slaves and praise-singers; the latter caste exploit the pride of the others by flattering them or by threatening them with sharp and generally defamatory criticism. Sonrai society is nonetheless industrious, and by virtue of its polygamous and matriarchal structure, the women do comparatively more work than the men. The religion is

Islam, and the language is strongly influenced by Arabic, which is no doubt due to the occupation of the loop of the Niger by Morocco for sixty-four years (1591-1655).

The men work mostly at agriculture (with the hoe), at weaving, and at commerce. Women and children generally help with agricultural tasks, from sowing to harvest. The processing of cotton and housework are, however, the exclusive domain of the women.

The Fulani are a seminomadic people who raise mostly zebu cattle and merino sheep. They live in hamlets which they abandon periodically in order to find better pastures. Agile, slim, yet solidly built, these cattle herders are a quiet and observant people who seem to live exclusively from and for their livestock and are as mobile as the animals they raise. They dwell mainly in the *arrondissement* of Tonka and also occupy one neighborhood in the city of Goundam. Fulani women are very industrious and make the most of their dairy products, often covering ten kilometers on foot to sell them at local markets.

Fulani may be found from Mauritania to Ethiopia, and yet they have maintained their ethnic identity, probably because of their custom of marrying exclusively within the group.

The Moors and the Tuaregs, who are also nomadic herding peoples, practice a more wide-ranging form of animal husbandry. They live in the *arrondissements* of Tilemsi, Raz el Ma, Gargando, Farach, Douekire, and Goundam. The Moors are mostly concentrated in the *arrondissements* of Tilemsi, Raz el Ma, and Farach. These two ethnic groups are probably of the same origin, and they practice what is generally called pastoral nomadism. In general, they have the same patterns of social stratification: nobles, vassals, captives, and blacksmiths. Among the Tuaregs, Muslim teachers—who often come from the ethnic group of the Kei Essouk—may occupy a rank just below that of the nobles. Before independence, these people were organized by tribes, each led by a tribal chief and each organized into several subgroups. At the head of each subgroup was a group chief who administered his own domain with delegated power from the tribal chief. At independence time, the "tribe" was abolished, as was the canton, and the group chiefs were made directly responsible to the administrative officer of the *arrondissement*, who was an appointed Government official. The moral authority of the old tribal chiefs was so real and effective that it has not yet diminished.

The Moorish nomads comprise two groups—the Tormoz and the Doyloubba, both of which migrate between Lerneb (Tilemsi) and Farach and are great breeders of camels. They speak a dialect which is derived from classical Arabic and they consider themselves to be of Arab origin. They are an inbred or endogamous ethnic group a bit marginal even among the nomads. They are very diligent people with a natural gift for commerce and a fancy for long voyages.

The Tuareg nomads likewise consist of two groups: the Kel Antessar

and the Tinguereguif. The Kel Antessar were the only people of the old Sudan who were at the same time warriors and Muslim teachers. Probably of Arab origin, they believe that their ancestors came from Medina; they are very much Islam-oriented and are the only Tamashek group which can compete with the Koutas of Bourem and the Kel Essouk in knowledge of the Muslim religion. Though they are spread over the *cercles* of Rharous, Timbuktu, Goundam, and Niafunke, they are well aware of their common origin and form one of the most homogeneous Tamashek groups. Their center of gravity has almost always been Goundam. Those living in the *cercle* of Goundam dwell mostly in the *arrondissements* of Farach and Gargando. They are great breeders of cattle, sheep, and goats, but are also no strangers to farming, for they formerly owned vast fertile lands which they acquired partly with arms and partly through their religious influence. These were mainly cultivated by means of a system of leaseholding whereby a farmer, usually one of the sedentary people, worked the land but did not own it. At harvest, he gave the nomad proprietor two-thirds of the crop and kept one-third for himself. The farmer could on occasion be a captive slave of the landowner, in which case the entire harvest was turned over to the owner. This was, in fact, the most common situation, as captives were more numerous than leaseholders. Since the owner could not keep them all busy with his herds, he used them for farming.

Let us now consider briefly some aspects of nomadic society in the *cercle* of Goundam. It should be noted that nomads, from Hoggar to Mali, including the Niger Republic, have more traits in common than characteristics which distinguish them from one another. One must also remember that these people have always lived in an inhospitable environment, a hard world which they struggled to master with few resources other than ingenuity. To try to understand nomadic society from any other point of view would be a ridiculous pretense and inevitably would lead to biased conclusions.

We are dealing with a once feudal community, a proud, even overbearing people—proud because of the important part which the Tuaregs have played in the history of the loop of the Niger.

The basic unit of this society is the nuclear family of parents and children, later extended to include some of the older generation and other close relatives. In this family, the father's authority is strong although reasonable. The woman's role is very important, a fact which may at times cause problems for husbands who lack real authority. The strong position of women may be a heritage and vestige of the matriarchal succession which once prevailed hereabouts, especially in Tamashek society, a system which ran into trouble only in the seventeenth century when the Tademekket Confederacy—then concentrated around Tademekket (now Essouk, 18 degrees 46 minutes north, 1 degree 15 minutes east)—fell apart.

Marriage is essentially monogamous, despite the Islamic allowance of four wives, conforming with the contemporary marriage code of the

Republic of Mali. Contact with sedentary people has led to some cases of polygamy, principally among subgroup chiefs and civil servants. Women are generally hard workers, except in feudal families. Among the Imoushagh (truly "lordly" Tuaregs), the Kel Antessar, the Iforas, and those who imitate them in order to appear more important, the wife can become—by her attitude, her weight, her laziness—a real problem for her husband, whom she generally turns into a virtual puppet unable to run his own family. Consequently, men of these classes have begun seeking routes of escape and look for wives elsewhere. This is unfortunate for their tribal sisters whom social history has made into impossible wives.

Among the former vassal groups, women are hard workers and play an important economic role in the family. This is true of the women of the Kel Rezzaf, Imididarene, Kel Tichrayene, and Izemmaten (all from the *cercle* of Goundam). These women milk the goats and ewes, drive them back to the pens, work as shepherds, and sell the products of husbandry at the local markets. Such activities are generally looked down upon by the upper classes of Tuareg society.

If the material well-being of the family is principally the husband's responsibility, it is the wife's function to run the household and to raise the children. She is essentially an administrator, and in earlier times when nomadic society was more organically organized, she carried considerable weight in major political decisions. Her economic role has not diminished. You see her now making harnesses for camels, weaving mats from stalks of *afazo (Panicum urgidum)*, and producing travel bags, pillows, and all manner of useful or esthetically pleasing articles.

Children are employed guarding animals; carrying water, especially during the rainy season; and carrying wood. At the age of six or seven years, they may be instructed in the Koran and in Islamic doctrine by a Muslim teacher. In the family they are trained most of all in precepts of practical morality: to respect their parents and other older relatives, to respect their elders and the aged, to do good, to help those in need, to respect the property of others, to tell the truth, and so on. Cleanliness is also recommended to children, but not all that strictly in an area where water is so precious.

Husband and wife owe respect to each other and owe their in-laws a respect that borders on reverence. In certain circles, one never looks straight at one's in-law. It is even less proper to eat with in-laws, either from the same platter or in their presence. In the presence of parents-in-law, words and gestures must be measured and judicious. A son-in-law should not uncover his face below the level of the eyes; a daughter-in-law should keep her veil over her head. These customs are so weighty that one often hears the following saying: "If you so much as pass by the cemetery where an in-law rests in peace, cover yourself with your *litham*."

Since respect for the parents-in-law is one of the strictest rules of ethics among the Tamashek, the smallest infraction causes atrocious criticism which will spread in no time around the countryside. Given this possibility, it is rare that a son-in-law is willing to live near his wife's parents. Except in very particular circumstances, he takes up residence near his own parents, near another couple, or quite alone.

Nomadic society, Tamashek and Moor, is an endogamous society where marriages are contracted only with others of the same ethnic origin. It is very rare for Moors to marry outside of their Moorish communities and the same goes for the Tamashek. There is limited marrying outside one's own subgroup: a nobleman of one tribe may marry a noblewoman from another tribe and the same goes for the vassal caste.

Besides the white Tamashek there are two other classes within nomadic society. The Bella, former captives, are now liberated. Until national independence they constituted most of the labor force for the noble class. They did all the hewing of wood and the drawing of water; they were the herdsmen, the agricultural workers, and the servants. In all probability they were originally sedentary people kidnapped from their villages during raids or captured in battle. Some were bought undeniably, maybe from Black rulers, much as were the forebearers of the U.S. Black people.

In the *cercle* of Goundam, the Bella are very numerous and have not had to live under very difficult conditions, probably for two essential reasons:

1) Their masters were well off and could guarantee them decent upkeep;

2) Islamic influence moderated the rigors of the captive condition. There is, in fact, evidence of this assertion: when notified after independence that they could go wherever they wished, many decided to stay with their former masters.

Currently most of the Bella live in agricultural hamlets (*debe*) around the lakes. Besides agriculture, they raise animals, particularly goats and sheep. They are a marginal, but very dynamic, ethnic group, for whom work is the fundamental rule of existence.

The Inhaden, blacksmiths, are actually all-around craftsmen, for their skills include smithing, carpentry, jewelry, and leatherworking. They differ from the rest of the Tuareg population because of their occupations and their marginal social status which restricts them to systematic endogamy. Formerly they were the armsmakers of the community: they furnished the shields, daggers, lances, sabres, and knives. With the arrival of firearms, these traditional weapons are disappearing, but the smiths still work with iron and wood and therefore still produce a full range of domestic utensils: jars, bowls, basins, tent frames, mortars, pestles, knives, hatchets, awls, thorn tweezers, soup ladles, and camel and horse saddles. They also make

baggage, scabards, decorative articles, and so forth. Since they are few in number, they live in small family groups. They are always poor and install themselves near a Tamashek or Moorish encampment where they find their livelihood. They use all they earn for their immediate food supply. They never have animals or any form of savings, but the generosity of Tuareg society has made them, to their detriment, into spendthrifts.

Blacksmiths rarely will steal anything, but they are ready liars and gossipers. Many among them have adopted the profession of the praise-singer, a sort of troubador who cunningly exploits the pride of people in order to appropriate what they have. Fewer and fewer of them are interested in the crafts nowadays. There is, in fact, a sort of exodus from the traditional occupations of this group toward a new one which offers them—or offered them—more profit. This exodus is probably furthered by the increasing quantities of manufactured articles on the market which eliminates the need for handicrafts.

The Bella and the smiths speak the dialect of the tribes to which they attach themselves.[1] Thanks to a more dynamic development process within their class, the Bella seem to have better chances of survival as a homogeneous community than the smiths.

The nomads live in the bush, in the open country. The name they earned, *Ganji-Borey*, from the Sonrai, means "the people of the bush." As far back as we can trace their history, they are always to be found leading their animals from pasture to pasture, from one water hole to the next in the interior of the vast Sahara.

Always having lived in an austere geographic environment, in the midst of natural forbidding and hostile circumstances, they were impelled to struggle for subsistence, to keep constantly on the move, ever yearning for unlimited territory in which to live. The national borders which were introduced into Africa by colonialism are a paradox for these people for whom wandering is a factor of economic and psychic equilibrium.

They live in tents which are made of the skins of their animals, and these tents (one per household) are often gathered together, through affinity or necessity, into a cluster generally called an encampment. It is there that the heads of families plan together where and how far to go, as they must every time the pastures becomes scarce or the watering places go dry. As mentioned before, during the rainy season, the problems are less severe and the maintenance of encampments is easier. Sometimes there are joyful reunions of friendly families who have spent the hot season far from each other. This is the time for long evenings or socializing when young people can court and flirt, away from their parents. Traditionally, this "romancing" took place within the limits of an admirable respect for the integrity of the young women,

1. Many Tuaregs, some Moors, and all Fulani speak Sonrai, but few Sonrai speak Tamashek, Arabic or Fulfulde, or if so very badly.

as the birth of a child out of wedlock has always been a great scandal. But since there has been increased contact with urban centers, a deterioration of morals has set in—a deterioration which got its start with the insatiable sexual appetite of the French colonial soldiers.

The economy of this community mainly is based on animal husbandry. Nevertheless, in the special case of Goundam, the nomads—as said before—always have known the benefits of agriculture, since most of them have been and still are landowners, albeit landowners who do not work the land themselves.

They practice an extensive sort of breeding and herding based quite logically on the natural complementarity of their different animals. The cows are raised because of their milk and the quality of the products which can be drawn from it. The lambs give tender meat and the ewes give milk which is very rich in protein and yields ample quantities of cheese. Though these two species are the most vulnerable in a natural disaster and the most demanding as to food, they are also the most sought after because of their great commercial value. On the local markets, sheep can bring 20,000 Malian francs and a heifer up to 80,000 francs. Because of the lack of endurance of these animals, the nomads often limit the birth of calves and lambs, as much as is possible, to the time just before the rainy season.

In the *cercle* of Goundam, camels are found only in the *arrondissements* of Raz el Ma and Tilemsi, where they sometimes are the principal Moorish livestock. Camel milk is easily digested because it is low in fat and protein. For the same reason, however, it is unsuitable for butter and cheese production. The importance of the female camel in local nutrition is perhaps directly related to the role the camel has always played in nomad life in general.

The goat, noted for its frugality and endurance, is sometimes called "the poor man's cow." Its reproductive rhythm is the same as that of the sheep—two births a year, with a five- to six-month gestation period. In hard times, the goat, like the camel, manages somehow to survive, making do with whatever it finds to eat, and using its agility to pick leaves from trees. This characteristic has given it a quite different reputation among ecologists who hold the goat responsible for turning the areas where it lives into deserts.

Then come the donkeys, more used by the sedentary people of Goundam than by the nomads. These are beasts of burden, frugal and resistant, used for various services: moving, transportation of grains, travel, drawing of water, etc.

The community lives essentially off dairy products, although it has had other eating habits in the past, principally grain consumption. The nomad needs milk at all times. Milk means so much to him that he has laid down the following rules for its use and apportionment:

"To feed your wife and to get good butter, you need cow's milk";

"To feed a child and a hunting dog, you need goat's milk";

"To feed a prisoner and to get good cheese, you need lamb's milk";

"To feed a man and a horse, you need camel's milk.";

These rules, the result of long experience, can be respected only under optimal conditions which hardly ever occur.

At night, everyone milks his animals, keeping in mind the needs of the nursing animals. The milk is then given to children, to women, and finally to men. Whenever possible, some is set aside in a jar *(tazawat)* to sour for the next day. Then it is churned to make butter and the whey diluted with water and distributed. This is, however, much less nourishing than fresh milk because fermentation has destroyed the sugar. When there is not enough milk, such as during the hot season or in the last days before harvest, rice or millet is boiled. The nomadic herders of the *cercle* of Goundam often cook both by day and by night, although more out of habit than out of necessity.

Most of them own fields, mainly around Lake Faguibine, cultivated by sedentary sharecroppers who are entitled to half the harvest. Each nomad stores his harvest in a safe place, often on the lakeshore, rarely with his family. Then he has it brought little by little to his home on camel- or donkeyback. If this harvest is used up before the next one is in, the herder will not hesitate to sell an animal to buy more grain, because—quite apart from his own needs—the nomad has a strong sense of hospitality. To properly receive strangers, and especially travelers, is one of the ethical requirements of the community. To fail in this duty brings shame to the guilty one.

Another dietary habit, tea, causes the nomad to drink away a big part of his fortune without ever realizing it. Formerly a sign of economic power, tea drinking has now become a mark of courtesy. A nomad would be greatly embarrassed not to be able to offer tea to a guest. The high price of this item (5,000 francs a kilogram on the black market) and of the sugar which must be bought with it, the continuously increasing amounts consumed, and the hazards to health when it is taken as it often is on an empty stomach, make tea into a veritable social scourge.

The nomad's life revolves around the need to preserve his animals in order to pay taxes and to obtain milk, meat, butter, and to buy clothing, tea, and sugar. The nomad feels some repugnance for commerce and profit-making and shows no particular aptitude for accumulating riches. He lives, therefore, in an almost closed economy, an economy of subsistence and not of proliferation. The propensity to enrich oneself, which is found among strongly urbanized people, is nonexistent with the Tamashek.

C. Economy of the *Cercle* of Goundam

The foregoing has clearly shown the resources of the *cercle* of Goundam to be agriculture and animal husbandry.

As almost everywhere in Mali, agriculture depends on rainfall and on the flood level of the lakes. Formerly, regional agricultural production was increased by the yield of the two Daounas (two large lakes, twenty-

one kilometers south of Faguibine) which are now dry. When the French army of occupation visited the area on December 10, 1895, the two Daounas were full of water, but they dried out in 1905, and the fertile soil became worthless.

Agricultural activity is therefore concentrated in our day around Lakes Horo, Fati, Tele, and Faguibine. Although the methods of cultivation are essentially, if not entirely, traditional, the *cercle* of Goundam has always been, and remains, the breadbasket of the Region of Gao. In fact, the people of the neighboring *cercles* of Dire, Timbuktu, and Niafunke, and even the more remote areas of Kidal, Bourem, and Rharous regularly come there for provisions.

Regional grain production further suffered from the drying out of Lakes Gouber and Kamongo in 1971. Since then they have become practically uncultivable. Production also suffers from the fact that much fertile soil remains covered by the waters of Lake Faguibine. The most important cereal grains produced are sorghum *(Sorghum aethiopium)*, millet *(Pennissetum typhoides)*, rice, and corn. It should be noted that sorghum is cultivated much more widely than millet. The farmers, all sedentary Sonrai or Bella, prefer sorghum, and millet consequently represents only a small part of their diet. Although corn is valued for its great nutritive value and for its economic advantages, it is not very popular because of the heavy physical labor that its cultivation requires. The table which follows gives an idea of the grain production in the *cercle* (1976-1977 season).

As can be seen, food crops hold a clear edge over commercial ones. Peanuts are consumed locally or sold. Cotton is processed locally: the women gin it, card it, and spin it before handing it on to weavers who make the cotton into beautiful blankets worth up to 40,000 Malian francs. Those from the village of M'Bouna (opposite Tin Aicha, on the south shore of Faguibine) have an international reputation.

The grain production not needed for domestic consumption is partly exported to neighboring *cercles*, and partly sold to OPAM (the Malian Office of Agricultural Products), a state agency responsible for the purchase, storage, and resale of cereals and grains.

On the subject of agriculture, we should doubtless speak of landholding patterns in the *cercle* of Goundam. Before the colonial occupation, the land of Lakes Faguibine, Gouber, and Kamongo belonged mainly to the dominant ethnic groups: the Kel Antessar and the Tinguereguif. Lake Tele mostly belonged to the sedentary people of Goundam. Lake Horo was not farmed systematically until after it dried out in 1941-42. During the colonial period, the local administration distributed land to its collaborators—tribal and canton chieftans. Large areas were thus handed over to a single chief of a tribe or a canton, who then distributed the land as he wished among groups or villages or even among individual families. In this manner, land was passed from father to son and grandson and grew to be considered as true individual property, as

Table A

Grain Production of the *Cercle* of Goundam in 1976-1977

	SORGHUM — MILLET			RICE			CORN		
	area in hectares	yield (kg per hectare)	total production (metric tons)	area in hectares	yield (kg per hectare)	total production (metric tons)	area in hectares	yield (kg per hectare)	total production (metric tons)
Fagaibine	7,101	900	6390.9	3.2	1,000	3.2	720	600	432
Tole	5.7	800	4.6						
Gouber	967	900	870.3						
Fati	257	300	77.1	31.4	300	9.4			
Douekire*	1.8	800	1.4	421	700	294.7			
Kamango	134	300	42						
Horo	1.4	430	6	4312.5	570	2458.1	346	660	228.4
TOTAL	8457.9	N/A	7406.9	4768.1	N/A	2765.4	1066	N/A	660.4

Besides these crops there are also what are generally called "off-season crops": wheat, beans, peanuts, sweet potatoes, and cotton.

*Douekire, unlike the other areas listed, is not a lake, but the capital of a district where crops are cultivated on the plains and on the shores of ponds.

exclusive as any other sort of property. The people were and are still so attached to this land that there exists an agreement which excludes women from the succession. The reason is obvious: if a woman inherits land, she passes it on, in case of marriage, to her husband; therefore, she has to be excluded from the right to hold property.

The land was cultivated by sharecropping. The abundance of land and the restricted number of proprietors naturally led to a concentration of vast fertile holdings in the hands of one individual, who was certainly not able or disposed to work his fields with his own hands. He entrusted his lands to an appointed farmer or to his own captive serf if the captive had proved to be a responsible and hard worker. In the first case, the sharecropper had the right to keep one-third of the harvest, against two-thirds for the owner. In the second, as one can imagine, the whole crop went to the master.

So much private property and exploitation of human labor seemed incompatible with the scientific socialism which the country adopted as its economic doctrine after independence on September 22, 1960. Therefore, following independence there occurred what has been called—maybe erroneously—the "agricultural reform." We have not been able to find the original text of this reform, but its basic inspiration

BEST COPY AVAILABLE

was considered to be that "the land should belong to those who work it." Most of those who could satisfy that condition were the people who did not own any land; and most of those who owned the land were physically unable to work it. To apply the rule according to the letter would have meant taking the land away from the current owners, who considered themselves the true proprietors and would have seen such a measure as expropriation pure and simple. Faced with the likelihood of such general discontent, which no administration likes to see among its constituents, the Government eased off a little on the agrarian reform. The original owners were given back lands proportionate to the needs of their families and the surplus was distributed to other persons who had, or supposedly had no land at all.

In this way, there was a new distribution of the land, but it was not free of abuses itself. One cannot help noticing that today some state employees have fields of their own, and many poor peasants, who need the land much more, have none. The land was distributed by *chefs d'arrondissement* and by the first agricultural-extension agents of the area, and this system was sometimes marked by nepotism and favoritism. Other fields remain for years in the category of "available land"—i.e., not yet distributed—and yet are regularly farmed. By whom and for whom?

Far from disappearing, sharecropping still continues. Only the system for apportioning the harvest has been changed. The owner and the sharecropper now share the crop evenly. But this half-and-half sharing is purely theoretical. The farmer often subtracts or readjusts in order to obtain two-thirds of the crop and the owner is generally unable to verify these accounts. Without a doubt, the system of sharecropping must reduce agricultural output overall, even though the sharecropper is directly interested in the production. In addition to farming his own fields, a farmer is often obliged to supplement his income by working as a sharecropper on land owned by others. It is therefore difficult for him to get maximum yield from the fields with his traditional techniques.

Moreover, the distribution of fields is a problem which can turn up and needs to be dealt with almost every year. The fertility of lakefront land diminishes with the retreat of the water and reaches the point of uncultivability once the necessary amount of humidity is no longer present. Those who were given these fields find themselves empty-handed with acreage from which their best efforts can no longer draw anything.

The exploitation of the area of Lake Horo seems better organized. This area was the first where the Lakes Zone Operation (OZL), a Government enterprise with headquarters in Goundam, intervened and applied its methods. OZL has been trying to regulate water flow by earthworks, permitting the flooding of surfaces which need it and preventing flooding where it would do harm. The peasants cultivate plots and pay annual dues which can vary from one year to another. Sharecropping is officially banned in the Lake Horo area, but, in fact, it still exists. A habit that took perhaps centuries to establish does not change fast in a

society which does not consider it outmoded.

The second aspect of Goundam's economy is undoubtedly animal husbandry, of which we have already spoken in connection with the description of nomad life.

Animal husbandry is practiced most particularly by the nomads (Tuaregs, Fulani, and Moors). Let us take note of several summary characteristics:

The Tuaregs practice an extensive or wide-ranging variety of animal husbandry;

The Fulani raise only cattle, sheep, and goats;

The Moors raise mostly camels, goats, sheep, donkeys, and cows;

The Bella are principally interested in small livestock (goats, sheep, etc.) and, more recently, cows.

Small livestock is raised principally in the *arrondissements* of central Goundam, Douekire, Tonka, and Raz el Ma.

Cows and oxen are mostly raised at Tonka (an *arrondissement* largely populated by Fulani), at Gargando, and at Tilemsi.

Camels are raised almost exclusively at Raz el Ma (a predominantly Moorish area).

Donkeys come mostly from the central *arrondissement* (thirty-four per cent of the whole *cercle*), a predominantly Sonrai area where their animals are worked intensively. Horses are gradually decreasing in number and camels increasing as the sedentary population begins to appreciate and employ them.

The 1977 livestock census gives the following figures:

Cattle	24,499	Sheep and Goats	83,234
Camels	3,402	Donkeys	6,279
		Horses	518

Livestock provides the herder, here as everywhere, with milk and its products: meat, physical labor, and income from sales. We have mentioned already the importance of milk as food for the herding peoples. Fresh milk is consumed mostly at night, particularly in Moorish society.

Among Tuaregs, Fulani, and Moors, milk obtained by evening milking is divided into two parts: fresh milk for immediate home consumption and the rest for souring and curdling. The Fulani put their milk products, cheese excepted, to more systematic commercial use. The soured milk and butter are sold in towns. The Tuaregs eat or drink the churned milk during the day. Butter is either used in dishes—meat, rice, or millet—or treated and sold at neighboring markets. The curdled milk is made into cheese, of which part is consumed at home and part sold.

The transfer of cattle among individuals happens either by sale or barter. The barter, a vestige of former commercial arrangements, consists of exchanging one or several head of cattle of one kind for one or several of another. Cattle are sold back and forth among herding people

at any place and time, but sales are most frequent in the principal markets: Tonka (*cercle* of Goundam) and Lere (*cercle* of Niafunke). These markets deal primarily in cattle and camels.

Finally, it may be useful to mention the commercial sector. In the *cercle* of Goundam, commerce is carried on both by the state and by private merchants. The state trades through SOMIEX (Government import-export firm), OPAM, and the National Pharmacy of Mali which recently opened retail outlets in the region.

SOMIEX sells all sorts of articles, including foodstuffs, other cereals, and grains. They sell retail and wholesale. OPAM sells grains (rice, millet, and corn) which it brings in from other regions of the country or buys from the peasants.

Private commerce is carried on by individual shop owners or stand-keepers. The best known are Elhadj Sidi Amadou Yattara and Elhadj Alphamoye Haidara. These merchants retail a large variety of articles, including grains, fuel, and cooking ingredients, and they also serve as transporters, carrying people and goods along the Goundam-Tonka-Niafunke-Mopti route. SOMIEX sells at reasonable prices but often permits private merchants to buy up its stocks and sell them again at much higher prices. Outside these circuits, trading is carried on at weekly markets: Goundam on Monday, Tonka on Sunday, Adarmalene in the *arrondissment* of Gargando on Sunday, Bintagoungou on Thursday, and Raz el Ma on Friday.

D. Communications Infrastructure

The routes of communication are much the same here as in the rest of Mali. Transport is by road, by river, and by air.

Road transport goes by a small network of more or less negotiable bush roads. These roads link Goundam to Dire, its port on the Niger 35 kilometers to the southeast, to Bamako, 992 kilometers, passing via Tonka, Niafunke, Lere, Niono, and Segu. The Bamako road is not very passable during the rainy season. Another road, linking Goundam to Gao, 495 kilometers, via Timbuktu, 95 kilometers, and Bourem, 400 kilometers, is also in poor shape during the rains.

Other routes link Goundam with each *arrondissement* headquarters:

a) Bintagoungou ..... 50 km
b) Douekire ..... 39 km
c) Farach ..... 42 km
d) Gargando ..... 70 km
e) Raz el Ma ..... 110 km
f) Tilemsi ..... 166 km
g) Tonka ..... 40 km

Overall, it should be remembered that these roads are very sandy and therefore very hard on vehicles. They require much fuel and upkeep to stay in service. There is one exception; the road from Goundam to Dire,which is maintained regularly by the public works subdivision situated at Dire.

River travel is possible only when the river is high, usually August to February. River transport is organized by COMANAV (Mali Navigation Company) which is headquartered in Koulikoro. Passengers and merchandise for Goundam disembark at the port of Dire. The weekly arrivals of the COMANAV boat constitute the main source of supply for SOMIEX, OPAM, and the private merchants alike.

Air transport is taken care of by AIR-MALI with three weekly flights to Goundam, carrying mostly passengers and mail. These flights connect Goundam with Bamako, Mopti, Timbuktu and Gao.

E. Historical Background

Situated on the loop of the Niger River, the *cercle* of Goundam lies in an area which belonged successively to the Ghana Empire (tenth to twelfth century), the Mali Empire (thirteenth to fifteen century), and the Sonrai Empire (fifteenth to sixteenth century). The area was also conquered by the Moroccans and put under their domination from the sixteenth to the seventeenth century.

Undeniably, a large part of the region was under the domination of sedentary peoples. Oral tradition says that several villages were founded in the area before Goundam: some exist still (Aroane and Timbuktu); others (Adiawa, Sangoura, Maghadougou, Belekaka, Kira, Dera, Wara, Gouye, Molodogomey, and Dagney) no longer exist, but their ruins are still visible. Here and there in the *cercle* one can see vestiges of stone construction and numerous shards of pottery which recall an era when most of the population was sedentary, living particularly on the hills which border the riverbeds. Numerous remains can be seen on the shores of the Daouna lakes. Maghadougou is the current name of a well at the eastern end of the Daouna depression, but nearby one can see the ruins of an ancient village which probably was once the residence of the king (or a proconsul of the Mali Empire), for etymologically Maghadougou means "royal city" in the Manding language.

The village of Goundam itself is supposed to have been founded in the fourteenth century by a princess named Fatoumata Mellemke, sister or daughter of the emperor Kankan Moussa. Otherwise, the history of this region merges into that of the loop of the Niger, but it must be said that the sedentary population here was often dominated by the Tuaregs and the Fulani. The history of Goundam is intimately connected with that of the Tuaregs and therefore with that of Timbuktu. The Tuareg people have had their ups and downs, losing Timbuktu to the Mossi in 1337, then to the Sonrai, again to the Moroccans on April 25, 1591, and finally undergoing continued struggle with the Fulani. The Tuaregs have never been a disciplined people and often have been misrepresented as a tribe given to pillage by historians whose reasoning is colored by chauvinistic subjectivity. On the rare occasion when they were conquered, they disciplined themselves enough to prepare their return to autonomy. They are war-loving fighters and have at times rudely dominated their sedentary neighbors. This explains the offers made by

the townspeople to foreign conquerors, including the turbulent Sonni Ali Ber. The annexations by the Sudanese kingdoms were much more in the nature of true lord-servant relationships.

At the time of the colonial conquest, the whole loop of the Niger was unquestionably dominated by the Tuaregs. The conquest was marked by some important dates which highlight the history of the zone.

It is commonly known that Rene Caille visited Timbuktu in 1828, and that on December 6, 1853, the explorer Barth visited the Tinguereguif chief, Awwab, whom he described as "a person of truly imposing aspect and proud bearing."

The German explorer Lenz met another Tinguereguif chief, Fandagomo, on July 18, 1880, and described him as "a vigorous man, thin, lively, of medium height, and barely fifty years old; I could not see his face, which was covered by a *litham*. His language was rough and imperious, his laughter sonorous and imposing."

By 1880, the colonial penetration of West Africa was well advanced and all that was needed to secure French conquest was a pincer movement by the army of the Sudan and the army of Algeria. The French army set about this operation with a hatred of the Tuaregs grown ferocious since the destruction of the Flatters Mission on February 16, 1881, at Amguid (Algeria).

Thus it was in a state of virtual paranoia towards the Tuaregs that France set out to conquer the loop of the Niger. Lieutenant Caron cast anchor at Koriome with his gunboats on August 16, 1887. Faced with the obvious hostility of the Tuaregs, then under the command of Alwagalis (for the Tinguereguif) and Allouda (for the Kel Antessar), Caron withdrew rather than undertake a battle of uncertain outcome. Six years later, on December 8, 1893, Lieutenant Boiteux entered Kabara, thanks to his gunboats. On December 15, he entered Timbuktu at the request of the leaders of the sedentary city population who had been trying, unsuccessfully, to get the Moroccans to intervene since 1892. It was at Timbuktu that two columns, commanded by Colonels Bonnier and Joffre were to join. They started from Segu on December 23, 1893; Bonnier's column descending the right bank of the Niger River and Joffre's column the left bank.

The outcome of this reconnoiter is well known: Bonnier entered Timbuktu on January 6, 1894. A week later, seeing no sign of the Joffre column, he started back up the river on the left bank. In the night of January 14-15, 1894, his column was literally annihilated by the Tuaregs at Tin Bella (twenty-six kilometers northeast of Goundam). Colonel Joffre only arrived at Goundam on January 26, having burned the villages of Mekorey, Atta, and Tin Dirma. The casualties of Tacoubao, discovered and counted on February 9, 1894, brought French rancor against the Tuaregs to a fever pitch. They were the only enemy to be feared in the loop of the Niger. Hence repression was bloody throughout the region. After a surprise attack on March 23, 1894, which resulted in

the massacre of the Tinguereguif at Norgohondou, the colonial troops gave free reign to their ferocity, sacking and burning Tuareg encampments until 1898. Fearing lest they confront the united force of a whole region in arms, the French stirred up the animosity between nomads and sedentary people and played the Moorish Kountas off against the Tuaregs. Once they had discovered that the Kountas harbored long-standing ill feelings against the Tuaregs, the French went so far as to give them their own firearms. Then one after the other the Tuareg chiefs surrendered, each one discovering in turn that he could not go far alone. Only Mohamed Aly ag Mohamed Ahmad, a Kel Antessar chief better known as Ingonna, and Fihrun ag Alinsar, chief of the Oullimeden Tuaregs, resisted with might and main to their death. The first was assassinated by a French soldier on November 7, 1898; the other was accidently killed in an encampment on June 25, 1916.

The rest of the history of the zone is intermingled with the history of the colonial period in Mali, known at that time as the French Sudan. Having achieved conquest by arms, the French created an administration which would assure domination at low cost. The French Colonial Administration made it clear to the traditional chiefs that it alone constituted the supreme authority and would remain so, even at the cost of more massacres. At the same time, the French left these chiefs free to operate as they pleased among their own people, making anything they wanted out of their brothers except rebels against France. These arrangements are evident in the "treaties" between the Tuareg chiefs and the colonial authorities. Speaking of the villages over which France had recognized the influence of a Tinguereguif chief, Shebboun, a treaty on March 30, 1905, specified that Shebboun had the "right to collect reasonable taxes collected by the *commandant de cercle*." Furthermore, he had "the right to inflict just punishment on the inhabitants of these villages who deserve it and to change chiefs with whom he is dissatisfied."

All this notwithstanding, Shebboun and the Tuareg chiefs accepted colonial domination only out of resignation. The same is true of the other ethnic groups of the country. They considered their few privileges as mere crumbs compared to what they had had before. To blunt the nomads' tendency to gather together—the gregarious instincts which could at any moment lead to a general uprising—the French Administration split the nomadic population into "autonomous" tribes, each one divided in turn into subgroups or *fractions*. The sedentary population was similarly subdivided and organized into cantons in 1922. On September 3, 1926, the *commandant de cercle* of Goundam issued an edict specifying the areas which the Kel Antessar and Tinguereguif Tuaregs were allowed to use, undoubtedly to please two ethnic tacit opponents. This agreement was amended in 1939, a year before the drying up of Lake Horo.

Two great figures made their mark in the *cercle* during the colonial period: Mohamed Ali ag Attaher, chief of the Kel Antessar (West) and Shebboun ag Fandagomo, chief of the Tinguereguif.

The Kel Antessar, the only Tuareg tribe known both as warriors and Muslim teachers, is divided into eastern (Timbuktu, Rharous) and western (Goundam) groups. They are an ethnic group with a strong Arabic influence, well versed in religious matters. Their reputation in this area is equalled only by the Kel Essouk, or by some rare scholars among their sworn enemies, the Kounta of Bourem. They trace their ancestry to Medina (ex-Yatrib), a city made famous by the welcome and support which the prophet Mohamed received there after his flight from Mecca on September 24, 622. This ethnic group enjoys great esteem among the Tuaregs of Mali and of Niger, as much because of their presumed origin as because of their moral qualities and religious erudition.

When the colonial army arrived, the Tuareg confederation was placed, at least militarily, under the command of Mohamed Aly ag Mohamed Ahmad, better known by the famous name, Ingonna. As mentioned before, Ingonna was one of the rare chiefs to refuse submission until he was assassinated by the detachment of Lieutenant Reygasse of the French Army on November 7, 1898. His son, Mohamed ag Ingonna, was always suspect in the eyes of the Colonial Administration which did not lack pretexts for keeping him constantly under surveillance or house arrest. On December 22, 1915, less than two months before the escape of Fihrun from the prison of Gao—the escape which was to lead to the fatal battle of Anderamboukane—the French Administration at Goundam found a convenient formula and condemned Mohamed to three months of prison and one year of exile, commuted to one year of house arrest in Segu. Later he was deported to Dakar, where he died on June 22, 1917.

In our day, the Kel Antessar are spread over the *arrondissements* of Farach, Gargando, and Raz el Ma, all of which border on Lake Faguibine. They sit astride two cultures—Arab and Tuareg—and astride two economic activities: livestock and agriculture.

The Tingueregulf come from the Adrar of Ifoghas (present *cercle* of Kidal at the northern border between the Region of Gao and the Republic of Algeria). At the time when Tademekka (Essouk) was still one of the great capitals of the Berber world in the Sudan, there occurred a war of succession within the tribe Tademekket. The conflict arose in 1650 over interpretations of the orthodoxy of the rule of succession, which at that time was matriarchal. Those who appeared to be right were unfortunately beaten and descended toward the Niger. There on May 15, 1655, they asked the pasha of Timbuktu for permission to settle in the area, and the pasha acquiesced.

At that time, the area from Timbuktu to Raz el Ma was dominated by a Tuareg tribe, the Imaqqasharen. Some families of this tribe are found today in the *cercles* of Goundam and Niafunke. To it belonged the famous chief Akil ag Melaoual who ruled over Timbuktu from 1433-1468.

Gradually the Tademekket imposed their authority over the other

Tuaregs of the zone thanks to their military genius and their experience in war. This authority was exercised under the more or less distant supervision of the Oullimeden, who finally granted independence to the Tademekket under the command of Fandagomo in the nineteenth century. The Tademekket subsequently became the Tinguereguif. At the time of the French conquest, their influence reached from Bamba to Niafunke, while the Kel Antessar dominated the north and west of the *cercle* of Goundam. Mohamed ag Awwab was then chief of the Tinguereguif. It was he who led the party that destroyed the Bonnier column in the early morning of January 15, 1894. But two months later he died in the surprise attack on Norgohondou. The tribe then came under the command of his cousin, Shebboun ag Fandagomo, who passed it on to his son, Addaghi ag Shebboun before dying on November 13, 1946.

At the time of Malian independence (September 22, 1960), the problem of chieftainship led to dissensions within the tribe, even though the tribe itself was to be outlawed as an official entity soon after. The Administration of independent Mali thought it wise to divide the Tinguereguif into two groups, one of them in Dire (formerly a subdivision of Goundam, now raised to the status of a *cercle*) under the chieftainship of Moradis ag Shebboun and the other in Goundam under chief Oumayata ag Mohamed ag Awwab. Although they issue from the same family, these two groups have little love for each other.

4. TIN AICHA

A. Historical Background

Tin Aicha already had a reputation before the project gave the spot its present fame.

In 1923, a raiding party of *regueybats* systematically pillaged the villages of Bintagoungou, Toucabangou, and M'Bouna, carrying away by force booty, women, animals, jewels, and so forth. In September 1923, the raiding party was captured by a detachment of the colonial army under the command of Lieutenant Leblond, reinforced by several Kel Antessar partisans. The engagement ended with the massacre of the *regueybats* whose bones can still be seen lying in the place known as Tin Aicha. Since then the name brings first and foremost to the minds of local people the memory of this famous battle.

It was not until July 1974 that the name acquired another meaning. Mali, like all the countries of the Sahel, underwent a long period of drought, particularly acute and even tragic between 1972 and 1974. The drought struck especially hard in the Sixth Region, the Region of Gao, and harder yet in the eastern and southern part of it (*arrondissements* of

Timbuktu, Kidal, Bourem, Gao, Ansongo, and Menaka), an area where rainfall rarely has been sufficient. A brutal lack of rain led to a dramatic deficit in pastureland, and the region's herdsmen began a massive exodus, some toward the river, some toward the neighboring Republic of Niger, and some toward Algeria to the north. The exodus became, in turn, a catastrophe as people and livestock alike were decimated by weakness or dehydration; children and women were found abandoned or lost in the course of the headlong retreat. Open to all dangers during their desperate flight, both humans and animals died of hunger, thirst, or both, without help and without hope, often anonymous and abandoned. By the time that relief efforts were organized by the Government in 1973-1974, the losses already had reached alarming proportions.

The relief efforts were organized in "camps for the disaster-struck" as they were called. There were found an indiscriminate assemblage of people—old and young—often belonging to several different *arrondissements* and several different ethnic groups and some groups which had never lived together such as the Kounta of Bourem and the Kel Antessar. In the *cercle* of Goundam there were two of these camps, one at Goundam and the other at Douekire. In the camps, hunger and thirst had concentrated people who previously hesitated to visit towns even to seek medical care. These people carried on activities which would have seemed indecent in the eyes of the Tamashek community in normal times. Once parents-in-law and children-in-law had eaten out of the same dish or drunk milk from the same cup—powdered milk, at that, of doubtful origin in their eyes and procured in the pushing and shoving of a handout line—a sort of overturning of the entire ethical basis of the group began to set in. Things like begging, which only yesterday seemed repulsive, became almost normal, if not acceptable. The people in these camps lived, thanks only to national and international sympathy. Rightly or wrongly, they had the impression of being ridiculed by the society around them. It was in this atmosphere that the "camps for the disaster-struck"—sometimes euphemistically called "welfare camps"—were abruptly closed.

To avoid subjecting all of the refugees to the displacement and confusion brought about by the closing of the camps, the *commandant de cercle* of Goundam at that time, Captain Kibily Demba Diallo, asked those of the Goundam camp if they wished to be granted a plot of land to cultivate in order not to remain totally unemployed. One hundred families totaling approximately 500 persons came forward as volunteers. The families were entirely nomad herdspeople who had been near Goundam when the worst of the disaster struck in 1973-1974. At the end of July 1974, Captain Kibily Demba Diallo, today a battalion chief in the Malian Army, installed this group of people at Tin Aicha, on the north shore of Lake Faguibine, opposite the important village of M'Bouna, located on the other shore. By that time, Dr. George Povey, AFSC consultant, already had been in contact with Malian authorities to

discuss the idea of providing these 100 families not only with fields but also with livestock. Though tentative at the outset, this notion was finally given serious consideration by the Ministries of Production, Defense, Education and Health, and the National Livestock Service. These Agencies, with the financial support of the AFSC, transformed the initial idea into an integrated development project with a double purpose: to try resettling nomads on a sendentary basis and to rehabilitate the families who had been victims of the drought by rescuing them from the social and economic upheaval into which that calamity had plunged them. The 100 families who had settled on the very edge of the lake were sustained initially by project funds and received supplies of powdered milk, sorghum, and dates in order to hold out until harvest time. The fields which had been distributed to these families were, in fact, already under cultivation and the shoots of rice and millet were up at the time the land was distributed. But, since the harvest was insufficient, supplies ran out, and the final arrangements for administration of the project were slow to materialize, several families developed doubts about the entire operation and left.

At the beginning of the year 1975, the little group—composed now of 53 families rather than the original 100—was transferred to a spot about a kilometer further from the lakeshore. It is there that the charter of the pilot village of Tin Aicha was signed on June 29, 1975, in the presence of the minister of the interior; the minister of national education; Eva Mysliwiec, representative of the AFSC; the governor of the Region of Gao; and Captain Diallo. Tin Aicha thus came back into history. December 1975 saw the creation of the Second Village of Tin Aicha about 500 meters to the northeast of the First.

B. Geography—Project Site

We have already said that Tin Aicha is located on the north shore of Lake Faguibine, 160 degrees 47 minutes north and 4 degrees west, opposite the famous village of M'Bouna which is situated on the south shore. The villages which compose Tin Aicha are located in a grove of stunted *acacia* trees. The *acacia* constitutes most of the plant cover to be found in the zone north of Lake Faguibine. The grove in which the villages are situated forms a sort of band parallel to the lake but separated from it by a large strip of fine white sand left there by the ebb of the lake. This strip has widened noticeably since 1956, as the waters retreat. To the north of this band of *acacia* trees *(Acacia raddiana)*, there is a vast stretch of sand dunes mostly covered by the remains of dead vegetation. The vegetation gets thinner and poorer as one goes toward the north. To the south of the villages and before reaching the lake, one encounters seedling patches of *Calotropis procera* and of a sort of sand grass *(Leptadenia pyrotechnica)*, growths which seemed inclined to spring up on most of the lands liberated by the ebb of the lakes. In fact, a regular forest has grown up on the dried-up lake bed. It is in this setting that the

two villages of Tin Aicha are located, perched on fine and shifting sand of largely silicous composition. Each of the villages is made up of huts fashioned from mats or straw, laid out in a more or less geometric pattern, and seperated by avenues recently planted with *prosopis*. Each village has a concrete well fifteen meters deep, which furnishes a sufficient quantity of good quality water. Additional need for water has been created by the reforestation program.

There is one school with three grades for the two villages. One hundred thirty-eight pupils are enrolled, forty-four of them girls. The school is in the Second Village, and two of the three teachers reside there as well. Tin Aicha also has a dispensary directed by a nurse, while an agricultural agent tends to extension duties, and a social worker concerns herself with hygiene and nutrition. In addition to this personnel, there is a teacher of Arabic. All except the two teachers live in the First Village. Each village looks out on its own fields.

The representative of the AFSC, based in Goundam, makes frequent trips to Tin Aicha, sometimes as frequently as twice a week, covering 100 kilometers of sand and sometimes poorly defined track in a Landrover.

The village is close to several farm hamlets (Cherifene to the east and Kel Rezzaf to the west). It is located in the territory of the *arrondissement* of Raz el Ma, about fifty-three kilometers to the east of the headquarters of the *arrondissement*. Twenty-one kilometers southwest on the south shore of Lake Faguibine and in the *arrondissement* of Gargando is located the village of Adarmalene, well known for its weekly Sunday fair. The Adarmalene fair is one of the most important markets of the *cercle* because it brings together not only market-goers of the various *arrondissements* of Goundam but also peasants and nomads from the *cercles* of Timbuktu, Dire, Niafunke, and even from the neighboring Republic of Mauritania.

C. Population

First Village (1975)

In August 1975, this village—which began, as mentioned, with 53 families—included 455 people, of whom 209 were female. The proportion of males in the population was therefore a little above average. There were 207 children in the village of whom 77 (37 per cent) were enrolled in school. During the year 1975, the village had a birth rate of 59 per thousand and a very low death rate of 6.5 per thousand, giving an impressive rate of population growth: 52.5 per thousand.

First and Second Villages (1976-1977)

As of this writing, the First Village includes 86 families and 494 people, 239 of them female. In 1976, the Second Village had 93 families totaling 446 persons, but in July 1977, there remained only 69 families and 395 persons, including 202 women. Overall, at present, there are therefore 155 families and 889 inhabitants, 441 of them female. The proportion of males in the population is 50.4 per cent.

The birth rate overall is 15.74 per thousand and the death rate rather high: 22.5 per thousand. According to the chief nurse of the dispensary, this can be explained in part by an epidemic of measles which struck the villages in 1976, affecting particularly the First Village. It is due also to poor nutrition from which these people still suffer. The average age is twenty-five years for the females of the First Village, twenty-two years for those of the Second Village, twenty-one years for the males of the First Village, and twenty-two for those of the Second.

The average age of the First Village is twenty-three years, while that of the Second Village is twenty-two years. Overall, the population has an average age of twenty-two years. Distribution of population by age groups is as follows.

Age	First Village		Second Village	
	Male	Female	Male	Female
Up to 15 years	45%	41%	51%	39%
16—25 years	19	12	16	13
26—35 years	10	19	8	21
over 35 years	26	28	25	27

We are dealing with a population which is very young and almost equally so in the two villages: sixty-four per cent of the males of the First Village are twenty-five years old or younger, which represents a sizeable human resource for such a small population. The proportion in the same age group in the Second Village is sixty-seven per cent. These figures are even more significant because the proportion of males is close to the average in the First Village (51.6 per cent) but less than the average in the Second (48.8 per cent).

Of the 155 families which live in the two villages, 104 come from Goundam *cercle*, 40 from the Timbuktu *cercle*, 9 from that of Rharous, and only 2 from that of Bourem. Among them one finds Kel Antessar people (eastern and western groups), Kel Tichrayene people, Moors, Bella, and Inhaden.

The composition and size of the population undergo frequent variations. Families move away for more or less valid reasons: impatience, the difficulty of getting settled, and uncertain or insufficient food supplies, for example. They may be replaced by other volunteers of different origins.

D. Organization

Each village has its village council elected democratically, which functions under the authority of a village chief, who is himself a member of the council. The village council considers all the problems of everyday village life, from disputes between neighbors to the management of village property such as fields and livestock. The council is therefore responsible for policing the village and for enforcing decisions handed down either from the administration officer of the *arrondissement* (the representative of the national Government) or from the Coordinating Committee of the project.

The organization of village life is woven from two threads: fields and livestock.

As mentioned earlier, fields are a strip of land parcelled out on the basis of one *soumboy* for each family member. Altogether the fields form a long band which has as its base the edge of the lake (approximately 2,000 meters) and which is about 300 to 400 meters wide. It is divided into rectangular segments, parallel to each other and perpendicular to the lakeshore, each one of which constitutes a field. All fields have, therefore, approximately the same length or depth, which is the distance from the edge of the lake to the edge of the cultivated belt bordering it. Their size is defined by specifying the variable dimensions: the number of *soumboys* or lakefront which they cover. The boundaries between fields are simple paths trodden down by each family's daily rounds.

This land is not very fertile, for it is heavy in silica. The "high lands" (those far from the shore) are made up of a layer of pure silica and support what are called the "off-season crops"—beans, watermelon, and sweet potatoes. Corn and sorghum also may be successfully raised there in the rainy season. The agricultural-extension agent estimates the width of this band at 550 meters, but this seems questionable since the width of the entire cultivated belt—as presently constituted in the area of Tin Aicha—is less than this figure.

The "middle lands" which constitute the next band of cultivation are composed partly of clay and are suitable for raising sorghum when the waters of the lake recede.

Finally, the "low lands," composed essentially of alluvial soil and assured constant humidity by the nearby lake, are very suitable for the cultivation of rice. Each family cultivates its own parcel as its labor capacity permits. The beginnings were very difficult since these "refugees" from the herding life had never before struck the earth with a hoe with the idea of raising crops. The most advanced in this regard were those who had simply seen a field or who had watched farmers at work from a distant vantage. Intense manual labor carried out for prolonged periods of time was virtually unknown in Tamashek society.

Anyone could have verified this by noting how the hands of men, women, and children became covered with blisters during the early

days of the First Village. But little by little, with necessity pushing and experience helping, the people finally acquired more skill and more endurance. In certain cases, it must be noted, the composition of the family was itself an obstacle; as for example, an old man having only his wife and his small children or having only daughters. In such cases, the field is cultivated either with the assistance of the group (a relative or a friend lends a hand) or by hiring an able-bodied man who is paid either in kind or in money. No one remains idle. One sees children of ten to twelve years hoeing on Thursdays and Sundays (the two days of the week when there is no school) and during the summer vacation. The women, though unable to do hard physical labor, busy themselves with weaving and watching over the fields to protect them from parasitic animals and birds. They also take an active part in transplanting and at harvest time.

Some of the families organize a sort of permanent surveillance so that the field, once planted, will always be watched by a member of the family. The person returns home only at nightfall. Others visit their field twice a day, in the morning and afternoon.

The livestock is made up of heifers and ewes. It was distributed in accordance with the following schedule: one heifer and one ewe for each family of one to three members; two heifers and two ewes for each family having four to seven members; three heifers and three ewes for each family having more than seven members.

By August 1, 1975, 208 heifers and 206 ewes had been distributed to 53 families in the First Village. The Second Village was officially established in December 1975, and received, by the same accounting, 175 heifers and 177 ewes. Each village has breeding males for its livestock population.

These breeding males do not belong to any particular village family. They serve each herd as a whole, but—theorectically, at least—are the common property of the two villages. At the beginning of the project, the care of the animals was entrusted to herders paid with project funds: one cowherd for the cattle and one shepherd for the sheep. As these herders did not come from the village, the population of Tin Aicha tended to have little confidence in their sense of responsibility, for good reason, perhaps, since the herders had no physical stake in the well-being of the animals. In any event, they were eventually replaced by volunteers from among the inhabitants of Tin Aicha, people who were therefore immediately concerned for the health of the livestock and who were paid by the other members of the village (fifty francs and one pot of rice a family a month). This procedure made the herding operation more reliable and responsible, both because those in charge were watching over their own animals in the herd and because they felt bound to the herd by their own membership in the village.

The AFSC representative makes periodic checks to insure that the herders are doing their work correctly. This control also serves to

restrain the temptation which certain individuals may feel to withdraw their own animals from the common herd.

E. Staffing and Results of Service

We have already spoken of the organization of the project: the Interministerial Committee at the national level, and the Coordinating Committee at the level of the *cercle* of Goundam. In Tin Aicha itself, local staff is provided by regional government departments. Five staff positions were planned: a veterinary technician, a school teacher, an agricultural agent, a public health nurse, and a social worker. At the outset, there was, in fact, one teacher, a public health nurse, and an agricultural agent. Those responsible for the project felt that it would be best to recruit staff who were native to the region and knew it well; and for this reason they assigned two additional teachers to Tin Aicha, both Tuareg people from the *cercle* of Goundam (and from the Kel Antessar tribe).

At the outset, the population also asked for an Arabic instructor who might teach their children the basics of the Muslim religion. Such a person was found (he is also a Tuareg of the Goundam Region) and was assigned to the project. The agricultural agent and the public health nurse are of sedentary origin. The first agents assigned to these positions were quickly removed because they experienced problems of adjustment and adaptation when thrust so abruptly into an unfamiliar environment of which they knew practically nothing. Their successors—the incumbents—seem to get along well with the people. As for the two Tuareg teachers assigned to the project, they were scarcely more at ease in Tin Aicha than the agricultural agent and the public health nurse, but for very different reasons. Within the village itself they had many relatives and acquaintances to whom they could not turn a deaf ear. They were obliged to share their salary with them at the end of each month, which put them in an extremely difficult financial position. To that must be added the fact that they found their duties unclear and ill-defined and themselves obliged to deal with many problems, large and small, for which they did not feel officially responsible or adequately prepared. At the beginning and still today to a certain degree, the administration of the village was essentially handled by the school teachers.

One of the first teachers, the principal of the school, requested and received his transfer at the close of 1976—a pity, for he had the type of temperament which the project so badly needs. He was calm, poised, and preferred not to act rather than to act precipitously; he was endowed with a considerable ability to analyze and was very familiar with the environment. But he seems to have encountered difficulties which prevented him from working effectively. He even seems to have been disheartened.

At the beginning of the school year 1976-1977, two other teachers of nomad background were assigned to the project, one from the *cercle* of

Goundam and the other from the *cercle* of Gao. The first was to replace the departed principal while the other was to take charge of the third group, an additional first grade which opened in October 1976.

As for the veterinary technician, no one was ever assigned to the project to fill this position. However, a regional livestock agent, based in Gargando and serving the *arrondissements* of Gargando, Raz el Ma, and Tilemsi was asked to visit the herds of the project periodically. It should also be noted that no livestock is distributed until it has been initially inspected by a veterinary agent.

The first social worker assigned to the project did not wish to install herself at Tin Aicha. This woman came from an urban background in Bamako and was used to the high-pressure atmosphere of city life. Humanly speaking, there was no way that she could enjoy herself at Tin Aicha where all efforts are bent to making life flower again. After she left, an assistant social worker was hired at last. She is a sedentary woman of Sonrai origin, a native of Goundam, but a person who is making admirable efforts to know and understand the people and to adapt to their way of life in order to help them change in the hoped-for manner.

The Results

We must now see what results have been attained by the different services established at Tin Aicha. We will look at them in the following order:

1. Agriculture

We have already cited the distribution of land among the different crops cultivated at Tin Aicha, a distribution which is imposed by the very nature of the soil. Let us now consider the results of agricultural activity. The agricultural agent has given us a yearly farm calendar which can be portrayed as follows.

The harvest of 1975-1976 (First Village only), yielded the following production:

Rice	26.58 metric tons
Sorghum	6.54 metric tons
Corn	0.8 metric tons
Sweet Potatoes	1.25 metric tons
Beans	0.8 metric tons
Melons	0.3 metric tons

The agricultural-extension agent ascribes these poor and altogether insufficient results to infestation by birds (the rice crop, particularly), to the appearance of blight on the sorghum, and to damage caused by stray animals.

On the monthly calendar (pg. 180) we see that the food crops which are essential to nourishment are also those which have the longest growing cycle: sorghum and rice. It is also evident that necessity impels the peasants to sow as soon as they have harvested. This tends, of course, to impoverish the soil, of which there is already too little.

Table B

MONTHLY PRODUCE CALENDAR

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
SEASONS	COLD DRY		HOT DRY					HOT RAINY		HOT DRY	COLD DRY	
Dry-Season Floodland			....							////		
Rainy-Season Sorghum					....						////////	
Rice (Oriza Gladina)	.....		||||||||||||||||||||	|||||||||||||||||||||||||	
Rice (Oriza Sativa)		.....		||||||||||||||||||		|||||||||||||||||||	
Millet					.....					|||||||||||||||||	
Corn				....	///	...	///	...	////////			
Beans	.....			//////////	.....				//////////			
Melons	.....			.....		.....			//////////			
Potatoes	.....	||||||||||||||||||||||||||||||	|||||||||||	

Legend: Sowing .....
Transplanting |||||||||||||
Harvesting ////////////////

In 1976-1977, the production of the two villages together amounted to:

Rice	20.074	metric tons
Sorghum	12.9	metric tons
Corn	3.15	metric tons
Sweet Potatoes	1.85	metric tons
Beans	3.02	metric tons

The agricultural agent gives the same explanation for the alarming decline in rice production in 1976-1977 as he had for the shortfall of the previous year. To get a better idea of the insufficiency of this production, let us estimate how consumption of the principal cereals (rice, millet, and corn) should increase each year. If one estimates that harvested rice loses fifty per cent of its weight in the hulling process (which is not far from reality) and if one takes a base two meals per day, per person, of 250 grams of hulled rice and 300 grams of sorghum, the following annual consumption can be calculated for Tin Aicha as a whole:

Rice	500 gm x 889 x 365	= 162.243 metric tons
Sorghum:	600 gm x 889 x 365	= 194.691 metric tons

In short, the present production of rice is only twelve per cent of the

amount needed and six and two-thirds per cent of the sorghum needed.

In addition, it should be noted that the standard yield per hectare established or estimated by the Lakes Zone Operation for Lake Faguibine (1,000 kilograms for rice and 900 kilograms for millet) is far from the theoretical average yield calculated or estimated by the agricultural agent for the land at Tin Aicha: 500 kilograms for rice and 300 kilograms for sorghum. This, in its turn, is clearly superior to the return actually obtained by the farmers of Tin Aicha, namely:

Rice	315 kg
Sorghum	110 kg
Millet	75 kg
(versus a standard of 300 kg)	
Corn	300 kg
(versus a standard of 1,000 kg)	

This confirms the opinion of Tin Aicha farmers who told us: "The land which we were given would have been sufficient if it had been chosen in fertile areas. But, in fact, the most productive part of our land, the part with the most alluvial soil, is still under water. The same is not true in other areas we know well along the shore of Lake Faguibine."

The double problem of the size of the fields and of their obviously insufficient return is therefore a major one. A few calculations or simple estimates at the outset would have permitted the establishment of the project on lands which would have provided a much better basis for it. People whose needs reassert themselves at the least hope of satisfaction are well aware of what better agricultural production would have permitted them to acquire: additional food and clothing in particular. The population of Tin Aicha lives mostly from grain and would therefore have been able—had it been possible—to satisfy its other nutritional needs by exchanging a part of what it reaps from the land for other products, and, in fact, it tries to do so. When we asked people, "What do you use your harvests for?", all answered unanimously, "We use them for our own food." Insignificant quantities are traded for kitchen salt and spices. The production of one family, managed and consumed under ideal conditions, cannot nourish it for more than six months. The rest of the year the people look for supplemental support mostly made up of wages for small jobs done for other villages and of the largesse of relatives and friends who are better off.

This seems to belie the statements of the agricultural-extension agent who maintains that some of the peasants "eat their wheat before it's grown" by borrowing, two months in advance, the worth (at what prices!) of their harvest in tea and sugar from a merchant of the region. The peasants deny this, but it is not impossible, given the importance which tea now has in the diet of the nomads.

People seem optimistic about future production, for most of them know the area, and many affirm: "When the ebb of the waters has left us fertile land, we are convinced that we will produce enough or more than

enough." According to the agricultural agent, the water recedes at a rate of twenty meters a year. Assuming that this increase in lands is constant, in 1980 there will not be more than twelve hectares added to the present area under cultivation. The increment in production that can be expected from this new land—even given the maximum output of 1,000 kilograms per hectare of rice—is insignificant when compared to the needs of a growing population that already has a serious food deficit.

What has been accomplished to date seems nonetheless to have had a satisfactory psychological impact. The agricultural agent does not hesitate to state: "Each villager cultivates his own fields, and everyone gives full attention to farming at the appropriate time. The women work hard at weeding, transplanting, and hulling. The young people are fully occupied with farm work, which at its height is the number one activity of the whole village. You could say that there has been a very noticeable change in attitudes." To avoid discouraging those who have made such an important change, he suggests giving the villagers more land and more fertile land.

2. Livestock Raising

In 1975-1976, 208 heifers were distributed to the First Village. Ten died almost immediately. Forty-one new calves survived the calving. One of the bulls of the herd wandered away and could not be found. Taking all of this into account, we have a rate loss of 5.83 per cent for the cattle population as a whole. As the birth rate was 21.22 per cent, the overall growth rate for the period was 15.39 per cent.

In 1976-1977, the rate of loss (animals which died or wandered off) was 9.52 per cent. It was twice as high as for the preceding year, which is due to the fact that twenty-seven of the eighty-four calves produced during calving were stillborn. However, the birth rate rose to 36.36 per cent, which gives an overall growth rate of 26.84 per cent.

The results for the sheep herd are much more disturbing. Since the gestation period of the ewes is only half that of the heifers, the sheep herd is, in fact, growing at a much lower rate. In 1975-1976, the village received 206 ewes. Fifty-nine died shortly thereafter. One hundred thirty-one lambs were born, but only sixty-six survived. The herd had ten rams. The relevant figures for the ewes in 1975-1976 are, therefore, the following:

Birth Rate	62.08%
Rate of Loss	36.25%
Growth of the Herd	25.83%

And for 1976-77:

Birth Rate	60.09%
Rate of Loss	26.23%
Growth of the Herd	33.86%

The Second Village received 175 heifers (plus ten bulls) and 177 ewes (plus ten rams). In July 1977, the following results had been obtained:

Cattle:

Birth Rate	2.03%
Rate of Loss	6.59%

Here the rate of growth is negative, but this is due to the fact that most of the heifers which were distributed to the Second Village were too young to be bred (one to two years old). On the whole, therefore, the heifers could not calve before 1978.

Sheep:

Birth Rate	44.67%
Rate of Loss	37.89%
Growth of the Herd	6.78%

The rate of growth of the sheep herd, as may be seen, was abysmally low; out of eighty-eight lambs produced, seventy-seven were stillborn. These results demand some explanation on our part—an explanation which is, moreover, confirmed by the expressed opinion of the peasants themselves. We have mentioned that the animals were inspected by the Government livestock agency before the distribution (particularly in the case of the Second Village) and periodically thereafter. But it appears that certain errors were committed, errors which had serious repercussions.

First of all, the category of livestock chosen (cows and ewes) was poorly suited to the ecological conditions of Tin Aicha. Cows and ewes are vulnerable and demanding animals, as was amply demonstrated in the drought of 1968-1974. They need a diet which is not to be found at Tin Aicha, plants which cannot grow at present in the sandy soil which supports little more than the *acacia*. What was the upshot of this choice? People were forced to move their herds in a constant search for new pastureland if they wanted to keep their animals alive. Moreover, since livestock must be periodically inspected and counted by the proper authorities, the herders have to stay near towns and villages. They therefore move back and forth over land where there is insufficient vegetal cover to feed their beasts. The result of all this is that the animals grow weak, since they constantly lose energy, and have little chance to recover.

The rainy season, it is true, brings some relief, but we must recall that it only lasts three months and does not allow time to replace promptly the animals which fall victim to debilitation during the hot season.

The ewe is even less adapted to this ecosystem than the heifer. In fact, the animals distributed were merino ewes (wool-bearing sheep) which live better near a river than at Tin Aicha, which is situated in a Sahelian climate. It would have been better to choose the dama species, the sheep commonly kept by the nomads and therefore best known to them and best adapted to their geographic area. We come here to the general problem of the purchase of livestock for the project. Clearly the animals should not have been bought here and there (many of them in Lere or Tonka), and some animals were not up to the agreed upon standards.

For example, the First Village received old cows and some that were sterile or blind. Cows which had already calved one or more times before being sold to the project appear suspect in the eyes of the peasants and rightly so. People who only yesterday had livestock of their own know perfectly well from long experience that a herdsman does not decide to sell a cow which has borne a calf unless she has serious defects: sterility or very poor milk production. In the case of a heifer which has never calved, other factors are not directly apparent. Errors would have been avoided or kept to a minimum if someone had thought of adding to the purchasing committee representatives of the population who had long experience in this field. At least it would have been possible to organize better the search for lost animals if someone had known from where they came.

Another problem which arose and still exists is related to the difficulties which the animals—particularly the cows—experience in adjusting to their new environment. Herdsmen know perfectly well how attached an animal can be to the place where it was born or where it grew up. Cattle which are lost because they wandered off were generally trying to return to their home territory; for they were bought here and there and were probably of very diverse origins, since they were purchased generally at the markets of Lere and Tonka. This can be a critical factor in the case of large livestock: camels, for example, have been known to escape from Algerian markets in order to return to their habitual haunts in Mali.

As for the ewes, we have the impression that no really objective criteria were applied to their purchase. All up and down the south and north shores of Lake Faguibine people raise goats, a frugal animal which has much endurance and has been justly baptized "the poor man's cow." A goat can live acceptably where a ewe survives with great difficulty. Ecologists hold the goat responsible for turning the Sahel into a desert and we agree in part, especially in these times when protection of the environment is very much in style. But was the project conceived to save the environment or to save human beings? If, in spite of the opinion of the peasants (who would not have hesitated if it had been up to them to choose), the Interministerial Committee was categorically opposed to the distribution of goats, we think that it was nonetheless a grave error to try substituting ewes for them at Tin Aicha. The money invested in the purchase of these ewes is likely to be a total loss, as the percentages set forth earlier clearly indicate. The peasants were unanimous on this point: "We don't deny that sheep have a higher market value than goats of the same age, but this value can only be realized with dama sheep and on pastures near wells, not on the lakefront. If we had been consulted, they would have given us goats, for people there always have raised goats." The Moors go as far as to state: "If they had asked our advice and let us know that we could not have goats, we would have asked for donkeys for transport instead of ewes."

In the opinion of many of the villagers of Tin Aicha, milk production has

been relatively good, although it is limited by the number of milking animals belonging to each family. But the absence of pasturage does not permit the population to take full advantage of this resource, except during the three months of the rainy season when the livestock can be kept near the villages.

Many people are not particularly happy with the communal form of herding, though their objections are mostly subjective and psychological in origin. Before going further, let us note that the communal herd, or rather the practice of entrusting all animals to a communal shepherd, has certain clear advantages. Gathering the animals into a single herd develops their gregarious instincts, helps them get accustomed to each other, and thereby cuts down on straying. In addition, and this is very important, the villagers economize their own energies. In fact, tending the herd in common frees many hands which can be better occupied in agriculture and which would have had little time for the hoe if each person had responsibility for his own animals.

Along with these advantages, however, there are some disadvantages. A hired herdsman cannot give each individual animal the sort of care which its proprietor would like. The people so taken with their cattle are blind to other practical considerations. Their animals have restored their peace of mind and given them the impression—true or false—of having at last returned to their favorite mode of life: livestock raising. The mere sight of livestock—healthy and well-groomed livestock—makes an admirable impression on the nomad; and the peasants of Tin Aicha, especially those whose animals have died or strayed from the communal herd, are convinced, rightly or wrongly, that if they had assumed total responsiblity for their own livestock, things would have gotten better. Many have been able to save their livestock by being stubborn enough to withdraw them temporarily from the herd because their physical condition required special care, especially at the end of the dry season.

Furthermore, they have the impression that they are only part-owners of their animals. This impression, purely subjective from our point of view, but very real, is rooted in the individualism of their culture (albeit an individualism which permits intense personal and family loyalties) and it will not be dissipated until each family has complete responsibility for its own livestock. Then people will be free to discover for themselves that common herding has its advantages and to come back to it. To all this it must be added that the many criticisms addressed to the herdsman by the villagers, who often have very different ideas about the proper care of their animals, do not make his work any easier.

The problem of repaying the initial loan is also a constant obsession for the villagers. They do not feel that they own the livestock themselves until they have withdrawn from the common herd the animals necessary to make this repayment. Even if it is only a pretext, the repayment issue is at the root of the peasants' desire to manage their own animals directly. They are persuaded that in so doing, they can give their livestock

the sort of special care that will make it grow better and faster and will make repayment easier.

Furthermore, having learned that the third settlement (which was to include 100 new families) has been cancelled, they hope that the repayment intended to constitute the herds for the new village will be given back to the families who paid it or will be redistributed to those which have taken severe losses.

3. Teaching

We mentioned before that the school of Tin Aicha includes three grades, numbering 138 students of which 32 per cent are girls. This is a very high percentage for a nomad society, a society which has never looked with favor on education for girls. The educational curriculum is that of the Malian primary school system, a system which has as its basis widespread and quality instruction. The three grades (1976-77) include:

A first grade of sixty-one pupils, of which forty-two are repeaters;

A second grade of thirty-eight pupils, of which thirty-three are repeaters;

A third grade of thirty-nine pupils.

The results of the 1976-1977 school years were as follows:

Twenty-six of the sixty-one pupils in the first grade were promoted to the second grade and thirty-five must repeat;

Twenty-one of the thirty-eight pupils in the second grade were promoted to the third grade and seventeen must repeat;

Twenty-six of the thirty-nine pupils in the third grade passed into the fourth grade and thirteen must repeat.

So no student has been cut or recommended for definitive expulsion. Not all the students proposed for promotion have the requisite average grade (fifty per cent). The following percentages of the students meet that condition:

First year	27.86%
Second year	44.73%
Third year	53.84%

Seventy-three students out of 138 (that is 53 per cent) were promoted in 1977, but only fifty-five of them (or forty per cent of the student body) had the average mark.

The people say that they are satisfied with the implantation of a school in their midst. Many have stated that before they were against schooling only because it took their children so far away. It should also be added that many of the nomads have little affection for the habits which their children pick up in the urban centers, which seem to them shameful compared with their traditional ways. This is particularly true in the case of the girls. Their parents greatly fear the possibility of birth out of wedlock, the ultimate scandal in this society, as we have already said.

In spite of these apparently favorable comments, we should recognize that the results so far attained by the school are altogether insufficient,

as the statistics above make abundantly clear. This low output can be partly laid to the frequent absences of the students.

The rate of absence for the school as a whole in 1976-1977 was twenty-three per cent. This is a very high rate for a school located so near the pupils' homes. It cannot be explained by children playing hooky and there has not been any epidemic this year. Two of the three teachers were questioned (not including the instructor of Arabic). They complained that the children are very frequently asked by their families to do other work during the day, probably tasks of vital importance for the family. There is also another factor: the school teachers play an important role in the administration of the village, so as a consequence the school year is not entirely devoted to class work. One of the teachers had to crisscross the *arrondissements* of Gargando, Raz el Ma, and Tilemsi in search of lost heifers!

The ruralization of the teaching program, which was promised at the outset, has not yet taken place. The teachers feel that this would be an important and appropriate direction for the school of Tin Aicha. Present conditions seem to lend themselves to such an effort since the structures and institutions of Tin Aicha offer an ideal context for two ruralization projects. Why have the plans been delayed so long?

The school has a lunch program attached directly to the project and offers the children one meal a day during the school year. This meal is intended to be a substantial nutritional supplement; so it is composed essentially of foods rich in vitamins. The canteen staff's aim is to get the children used to a varied diet which the villages will be able to maintain at the end of outside financing of the project. Therefore, as a basic diet, they favor local foodstuffs, supplemented as need be with nutritive elements for which the villagers will at least be able to find equivalents later on.

The teachers think that since the school lunch program is designed for the students, it should be at the school. It also seems that the director is displeased at not having responsibility himself for management of the program. We suspect that this problem is an objective one because everywhere else the school lunch programs are under the direct responsibility of the school director. Perhaps the people of the village do not feel their director merits this confidence.

The teachers would like somewhat better housing and wish that matters could be arranged to allow the school to open on schedule instead of one or two months after the beginning of the school year. Of particular import is the timely assignment of new teachers. There is also the matter of rebuilding the straw huts which serve as classrooms. This work is not even started until the beginning of the school year. School supplies are lacking, although purchase funds are available.

Finally, the teachers say that they are somewhat at loose ends because they have the impression that they are responsible to everyone and to no one at the same time. In appearance, at least, they are responsible to the

primary school inspector (located at Timbuktu) and they complain of this arrangement. Then also there are little anomalies which can upset relations within the school. One of the director's assistants was designated "supervisor of the activities of the Tin Aicha Project," by the *commandant de cercle* of Goundam, and by virtue of this title, he is supposed to supervise his own director. In any case, he takes certain liberties and gives himself freedoms which are not normal in a subordinate.

This situation cannot help but create tensions which are evident under the surface. Finally, according to the teachers, the project annual enrollment does not fit the reality of the project if, in fact, the school is supposed to serve only the children of Tin Aicha. Given their annual rate of population growth, the two villages cannot continue to supply the school with enough students. The choice is either to recruit pupils from neighboring areas or to consider a new class every two years. There is one other question which must be considered: where will the children of Tin Aicha go if they obtain their primary school certificate—a diploma which is awarded by examination after the sixth year of primary school and is a prerequisite for entrance into the first year of the junior high school? Will it be necessary to add higher grades to the school of Tin Aicha or will these children have to be sent elsewhere (to Tonka or to Goundam) as are the students of all the other schools in the *cercle?*

4. Health and Health Education

According to the chief nurse of the medical facility, the health of the people is generally good. The most frequent illnesses are those well known in the nomadic milieu: bronchitis, malaria, and a variety of conjunctivitis probably caused by the fine grains of silica blown into the eyes by the prevailing winds—the harmattan and the northern trade winds. Bronchitis can be explained by the severe cold in Tin Aicha which affects children and adults who are so poorly protected (lack of clothes and huts which only provide a ridiculous amount of protection) and have a deficient diet.

The supply of medicine appears sufficient, according to the nurse, if its use is limited to treating the population of Tin Aicha alone. But the nurse does not seem inclined to restrict his services to the sick people of the village. This would in any case be a difficult assignment for a conscientious health worker, who should not make fine distinctions among suffering people who come to him for help.

The sick people go to the dispensary on their own initiative, frequently seeking the assistance or the opinion of the nurse and relying less than one would have thought on traditional medicine. Mothers, in particular, have taken to consulting the nurse at the least suspected illness in their children and this is a very encouraging sign.

The following tables give an idea of the volume of medical services dispensed in Tin Aicha and of the nature and frequency of the illnesses encountered. It should be noted that the second table covers only the first half of 1977.

Tables C and D

SUMMARY OF THE OCCURENCE OF INFECTIOUS DISEASES - 1976

	0 - 4 yrs		5 - 14 yrs		Adults		Subtotal		TOTAL
MALADIES	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	
Angina	1		1	1	1	4	3	5	8
Bronchitis	85	86	222	225	199	277	506	588	1,094
Conjunctivitis	82	102	201	202	102	173	385	477	862
Diarrhea	49	34	62	62	62	107	173	203	376
Gonorrhea					10	8	10	8	18
Jaundice				1	6		6	1	7
Malaria	62	57	139	156	168	233	369	446	815
Measles	12	17	35	13	8	4	55	34	89
Mumps	2	6	17	12	14	20	33	38	71
Rheumatism	1	1	21	38	56	137	78	176	254
Skin Disease	10	3	3	7	12	12	25	22	47
Syphilis	37	29	88	90	68	134	193	253	446
Tuberculosis					6	2	6	2	8
Whooping Cough	7	3	1	2			8	5	13
TOTAL	348	338	790	809	712	1,111	1,850	2,258	4,108

It is immediately evident that in 1976 the population was severely shaken by bronchitis (26.63 per cent of the cases). Children up to fourteen years represent fifty-six percent of these cases of bronchitis.

SUMMARY OF THE OCCURENCE OF INFECTIOUS DISEASES JANUARY - JUNE 1977

	0 - 4 yrs		5 - 14 yrs		Adults		Subtotal		TOTAL
MALADIES	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	
Angina			4	8	5	7	9	15	24
Bronchitis	20	30	97	106	132	121	249	257	506
Conjunctivitis	64	56	142	100	104	105	310	261	571
Diarrhea	35	22	39	44	46	50	120	116	236
Gonorrhea					1	1	1	1	2
Head Colds	13	12	30	30	29	34	72	76	148
Malaria	29	57	109	142	176	187	314	386	700
Measles	6	3	6	5		1	12	9	21
Mumps	12	14	21	19	15	23	48	56	104
Rheumatism			1	1	32	36	33	37	70
Ringworm	2	1	28	23			30	24	54
Skin Disease	15	14	18	19	20	22	53	55	108
Syphilis	14	9	49	54	70	79	133	142	275
Tuberculosis					1	1	1	1	2
TOTAL	210	218	544	551	631	667	1,385	1,436	2,821

These two tables show that the most common diseases are bronchitis (50 per cent of the cases for the first half of 1977 are in 0-14 age group) and malaria. Insufficient protection against the cold is the reason for such widespread bronchitis. As for malaria, the disease is endemic in the zone, particularly around Lake Faguibine, which is seriously infested with mosquitoes even if the disease is less rampant there than in certain other areas of the country.

There are cases of gonorrhea, a disease customarily unknown in the Tuareg environment except among individuals who have lived near urban centers. The eight cases of tuberculosis identified in 1976, and reduced to two in 1977, were certainly not cured. It is more likely that the infected persons simply stopped going to the dispensary either because they found that the treatment which was administered was not working or because they eventually were held back by a sort of false embarrassment, tuberculosis being considered in most areas of Mali (and perhaps throughout Africa) as a disgraceful disease.

Measles has grown proportionately less serious, but it would nonetheless be well to vaccinate all the children systematically each year. From a psychological point of view, there have been some very positive results: the nurse is regularly consulted at the least sign of illness, something which is far from common in nomad society; and the effectiveness of the treatments that are administered is slowly but surely dissipating people's widespread suspicion of modern medicine.

The nurse, a man of sedentary origins from the Bambara ethnic group, has adjusted very well to local culture, without losing himself in it. The personal rapport which he has been able to establish with people doubtless enables him to deal with even the most confidential cases and so to work very effectively. It appears that the people have no criticism of him and he himself is quite satisfied with their attitude toward his services and toward modern medicine in general. He complains, however, of the chronic lack of supplies, including, at present, his blood pressure gauge which is broken and has not been replaced. He would like to have:

some chairs

one thermometer

more medicine (taking into account the people from outside Tin Aicha who must be treated when they come)

one orderly or janitor and one nurse's aide (working alone, the nurse is swamped with cases and sometimes stays on the job from early morning to 1:00 p.m. before having a break)

Health education (domestic hygiene) is carried out by a social worker and is particularly addressed to women. Since the social worker speaks only Sonrai, the AFSC representative conceived the idea—and an ingenious one—of having the lessons translated into Tamashek and recorded on tape. "Listening sessions" are held almost every day at 8:00 a.m., and they seem to attract many women who gradually overcome their timidity and end up discovering answers to the questions asked on the tape. As we have already said, this social worker has adjusted admirably to her new environment. She has won the confidence of the people to such a degree that after a short training period in Banjul (Gambia), financed by AFSC, she was able to introduce the art of cloth dyeing into the village. The results of this new technique are very satisfying, for soon one will be able to buy Tin Aicha batik on the local markets.

The social worker also concerns herself with nutrition and helps make a dietary supplement for nursing children five times a week. She says that she is pleased with the attitude of the women: "They come regularly to our work sessions, and they put the advice which I give them into practice. I can see it myself when I visit their homes. I would prefer it, however, if our meetings could be held in a place of our own, rather than outdoors in plain view, as now. That way, my sisters could feel more at ease speaking of their problems, away from the eyes of men."

The subject of sexual hygiene has not yet been broached, yet it must be. But is the social worker herself psychologically prepared to handle this? In any case, the question must be dealt with. Should we not take advantage of the favorable conditions created by the project to raise the curtain (with prudence, of course) on all the problems which have been voluntarily neglected heretofore simply because tradition and custom dictated it?

5. Other Results

a. The Cooperative Store

It exists in an embryonic state—a single hut (as, in fact, are all the houses of Tin Aicha). The cooperative sells sugar, tea, oil for cooking, lamp oil, washing soap, and, sometimes, powdered milk.

But there is a lack of cloth, and people complain sometimes of not being able to find anything from which to make a shroud (white linen). Construction of permanent premises has been pending for a long time, but temporizing plus some unforeseen difficulties have combined to delay execution of the project each time. Apparently, at present, some progress is at last being made toward the achievement of this objective. The project has just obtained a Berliet four-wheel-drive truck which will be able to deliver building materials which are unavailable locally.

The cooperative sells articles in small quantities and operates very much in low gear since it is tended by the social worker, who is already quite busy with her own work and periodically returns to Goundam for visits. This slow pace also bogs down the turnover of inventory and can cause the clients of the cooperative to look elsewhere for the articles they need. Nonetheless, proper management of the cooperative could make it an important contribution to the economic life of the village and to the success of the project. To achieve this goal, it is vital, particularly at the outset, to adopt an appropriate pricing policy, the purchasing power of the people being very limited, which takes account of both local needs and the potential competition of nearby markets (Adarmalene and Bintagoungou).

b. Reforestation

The planners of the project envisaged a reforestation program, both because the area is almost stripped of all vegetation and because of the bad effects that a new settlement can have on the environment. In fact, towns and villages have been more responsible than goats for tearing

the trees from the land.

At Tin Aicha, 75 *nime* seedlings and 125 *prosopis* were planted in February 1977. All were still alive in July of that year. Flame trees and *acacias* have been tried, but the agricultural agent is not very optimistic about the flame tree, for he says that it is very demanding and does not stand up well to the hot winds of the region. A nursery of citrus trees and mangos was also planted and has a good chance of succeeding. Everything is under the supervision of the agricultural agent and is kept up (which means watering in particular) by a team of ten laborers recruited from among the young people of the village and paid at the rate of 5,000 Malian francs a worker, a month.

The success of this reforestation program can only have happy consequences for the project as a whole. First of all, these trees will not only add to the aesthetic quality of the village environment, but they will also furnish appreciable shade in a zone which certainly needs it. Then, too, on a psychological level, which is no less important, people will be simply amazed to have made trees grow by their own effort in a soil which apparently would support nothing but a few straggling *acacias*, generally destroyed almost as fast as they grow. This is not a negligible thing in a society which has known, without a doubt, how to use nature, but has not known too much about taking care of it.

5. TIN AICHA SEEN...BY TIN AICHA

The Tin Aicha Project, as we have already said, aims to save people who were left in complete disarray by the drought. It aims to give them a team spirit by integrating them into a new social whole. It is therefore a project of acculturation in the anthropological sense of the word. Since one gets into the intimate nature of a group by dealing with its culture, it is perhaps necessary to see what the people of Tin Aicha themselves think of the project in which they are involved.

We should note, first of all, that the inhabitants of the two villages did not come into the project under the same psychological conditions.

Brutally plunged by the drought into a sort of economic orphanage, picked up by the refugee camps, and suddenly thrown into disarray again by the abrupt closing of these camps, most of the inhabitants of the First Village came into the project because they had no choice. Dispossessed and left with a feeling of psychological and economic collapse, they had to grasp at the first hope offered in order to shake off this impression. They did not really have the time to weigh the advantages and the disadvantages of what was being proposed to them. You could say that they volunteered on a trial basis to see what they could see.

In the case of the Second Village, matters were quite different. There the people made a deliberate choice, perhaps taking into account the results obtained by the First Village, though it is a bit early for those results to have a major influence on motivation. The decision of the first group therefore stemmed much more than that of the second from the breakdown in the social order and the disruption of people's emotional security attendant on the drought.

Under those circumstances, people were ready to accept anything in order to survive, even things they would never have accepted before. One realizes this when one asks the inhabitants of the First Village what the project has done for them and what they find hard to accept.

To the first question, everyone gave the same answer: "The project allowed us to have an identity which we did not have when we were nothing but great herdsmen unsettled by the least adversity. We have obtained fields—even if they are insufficient—whereas before we had nothing and no hopes of having anything. We also see that by settling down we are saving our own energy. We used to spend our energy in many long wanderings; now we are able to manage it better and to concentrate on doing what must be done when it must be done. We fled from schooling for a long time because of the emotional isolation which it imposed on our children. We only went to the medical centers in cases of extreme necessity and then usually too late. But now the project has brought these things near to us. Contact with project staff opened our eyes to many things we did not know or had always neglected. But the principal benefits of the project for us have been the discovery of the uses of agriculture linked to animal husbandry and the chance to acquire the livestock which we thought was forever lost."

One could attribute these responses to a more or less real desire on the part of the people to compensate the project by expressing moral and material satisfaction with its results. Remarks like the above are easy to make, but we believe that the people are sincere in what they say. The responses given to the second question prove it: "We think that from the outset, given our own temperament and style of life, it would have been better to exercise more care in the choice of project staff. The first agricultural agent and the first public health nurse had serious difficulties in adjusting to our way of life. We cannot blame them for it, since they did not know us. The time we spent with them was therefore pretty much wasted; we have needed another whole period of familiarization and opening up with their successors before reaching the atmosphere of understanding which now binds us to them. We do not look with favor, either, on the departure of project staff just at the moment when we are beginning to understand each other.

"We think that to have given us ewes instead of goats was a grave mistake because we know this zone and we know that sheep never prosper here, the merino sheep in particular. If the damage goats do to the environment is an unanswerable argument for not giving us goats, it is

far from a satisfactory solution to peremptorily replace goats with sheep.

"Village people should have taken part in the purchase of the livestock. If this had been done, we are certain that the proportion of poor quality animals would have been very low. Those among us who were given one- or two-year-old heifers are at a real disadvantage. With cattle of that age, given normal rhythms of reproduction, they cannot possibly reimburse the animals loaned them in four years. Besides, from time to time, people come here to reclaim animals from the project saying that they belong to them and were never actually sold. If we had had representatives on the purchasing committee, they would have been able to determine the truth about these animals by tracing the story back to the sellers. These cases of contested ownership have had some ill effects on the atmosphere of honesty and trust within the project.

"From April to July, we would prefer that the cattle be pastured far from the lake. In order to do this, it will be necessary to dig a well in the northern range area. In the dry season, when pastureland and water are rather far away, cattle fall easy prey to weakness and ill health because of the long trips they must make.

"To care for the livestock properly, we need to be trusted a little more. We would like each person's animals to be under his direct responsibility.

"As for the fields, we all know that they do not suffice, particularly because they are made up of such a high proportion of fine sand.

"We also think that some families were stricken off the rolls a bit too hastily. This is generally the case for certain ones among us who, faced with the pressing needs of wives and children, left to look for help. Striking these families off the lists and classifying them as 'dropouts' during the first inspection, which took place in the absence of their chief, was not calculated to make us happy.

"We would have liked the school, the infirmary, and the cooperative to be built of permanent materials, because the slap-dash appearance of these huts makes many people outside Tin Aicha think that the project itself is a precarious undertaking."

The people say that they are entirely satisfied with the project staff, especially the AFSC representative. They have only praise for her endurance and her efforts to adapt to an environment which she is confronting for the first time. On the other hand, the people are not very impressed with the amount of their own participation in the administration of the project. The chiefs of the two villages make no bones about it: "We are not consulted enough about our problems. We ourselves feel that people carry out decisions that they have helped formulate better than those imposed on them from outside. We may be wrong in this, but we think that we understand some of our problems better than those who are foreign to these concerns and yet who are the only ones to propose solutions. Taking part in all the discussions which have to do with

our essential problems could also contribute greatly to our own training. This discussion would enable us to prescribe our own role in the success of the project. It would allow us to get a clear sense of our own responsibilities in the light of the real everyday issues."

The villages are optimistic about the results of the project. The chiefs, seconded moreover by the women and the young people, stated it very clearly: "We want the project to succeed, first, because it is in our interest and, second, because we want, at all costs, to avoid disappointing those who brought it into being: the Government of Mali, the AFSC, and our own staff in the field. We think that faith in success is one of the first conditions of success. That is why general assemblies have been organized from time to time in each village in order to keep the initial momentum alive in each person and to develop community spirit in all of us.

"Never to remain idle—except when exceptional circumstances require it—this is one of the golden rules which we wish to establish. We are using our religion, Islam, to set aside ethnic differences in favor of the interests of the group. In spite of what many think around us, we firmly believe that Tin Aicha will be able one day to function as a true village. Tin Aicha will even be able to operate better than many villages which surround it, especially if we are given a part in the resolution of its problems. Many nomads in the area are only waiting for this result in order to settle down in their turn."

The staff also appears optimistic about present and future results. However, each of the staff has complaints about his or her parent agency. They complain that they did not receive specific instructions when they were assigned to Tin Aicha. Given the responsibilities that they were given and those others they discovered on arrival, they feel that they were not adequately briefed. They say that they only came to understand the background and the goals of the project bit by bit. They feel that the objectives of the project should have been explained to them at the outset so that everyone understood to what degree their realization depended on complementary efforts: the efforts of each to adapt to the local environment and the efforts of all to help the village population accomplish the hoped-for changes.

Besides that the staff has the impression of being isolated in relation to their various services and in relation to the administration. They feel that there is a certain anarchy in the distribution of responsibilities and say that they never know exactly to whom they should report. We can recall here the case of the teacher who was named "supervisor of activities" of Tin Aicha and who sometimes goes off chasing strayed cows with an official travel order from the *commandant* while his class twiddles it thumbs. Each and every one would have liked to have had the moral support of her or his administrative superior—and even stronger moral support than in her or his previous assignment: the agricultural agent from the Lakes Zone Operation, the nurse from the regional medical supervisor, and the school teachers from the primary

school inspector. Within a general context of complementarity, they would nonetheless like to know who is supposed to direct whom; and they would also like to have more outside contacts and more opportunity to exchange points of view with the project Coordinating Committee at Goundam.

6. CONCLUSION

Born out of the compassion which Malian authorities and the AFSC felt for people who were stripped of their culture and livelihood, the Tin Aicha Project is the only one of its kind to come to life in Mali.

In fact, it is the first time that anyone has tried, with a minimum of thought and organization, to settle nomads on the basis of their freely given agreement. Settlement of nomads has always been one of the dreams of the Government of Mali. But the problem was no small one, since it involved dealing with one of the least known socio-economic environments of the country—one about which those who knew the least unfortunately felt entitled to say the most.

Many civil servants and other people initially saw the project as simply a waste of money, time, and energy; it must be admitted that persuading herding people to settle down and cultivate the earth seemed scarcely imaginable. Certainly errors were committed from the beginning, errors which the urgent character of the work—the rescue of disaster-struck families—rendered nearly inevitable. Perhaps it was forgotten a little too often that settling nomads, who only yesterday were herdsmen, and making them into farmers today is an operation which involves virtual reacculturation and therefore must be based, if one hopes for any degree of success, on anthropological considerations.

The project was designed to help people to live in a new environment, to act upon it, and be acted upon by it. Consequently, at least an approximate understanding of this environment and the social milieu should have been a requirement from the outset. Settling herdsmen and making farmers of them, without cutting them off from the raising of livestock, means dealing with a vast and complex slice of reality and one never does this efficiently without knowing a little of that complexity.

The natural and universal difficulty of bringing about changes in adults, whose basic personalities are already established, is further complicated in a society which remains quite attached to traditional values.

A preliminary study of the socio-economic environment would have enabled the organizers of the project:

to survey the most significant particularities of the local area;

consequently, to foresee the phenomenon of individual or group

resistance which may arise at any moment as a cultural defense mechanism against new influences;

to find the best possible ways of forestalling the disruptive side of these new influences;

to choose adequate methods for circumventing particular prejudices without useless harshness;

to draw up an accurate inventory of people's economic resources in order to judge how they might best manage and improve them.

Such an approach would at least have enabled the organizers to realize, for example, that though the goat is not the appropriate animal for Tin Aicha because of its destructive effect on *acacia* vegetation, the sheep—the merino variety in particular—is a very poor substitute.

It was not altogether possible to do this groundwork since everything was urgent in the early days. However, it was a mistake not to consult with the population about project problems and solutions particularly when it is the currently accepted practice of bringing about change. As a consequence, the village people feel frustrated, as was clearly spoken to above, but they felt that any manifestation of discontent on their part would not be appropriate, given their great good fortune, which they thought they owed only to the generosity of the Government and the AFSC.

If village people were consulted before decisions were made, if staff were better motivated to solicit their suggestions as well as their services, and if the Coordinating Committee (Goundam) made its presence and support more evident, it would be possible to get a vital current flowing from local experience to the central planning councils and back again to the field. In other words, from the socio-economic context of the project to the Interministerial Committee and back, passing in both directions by way of the Coordinating Committee which plays, in a sense, the role of regulator. But, at present, the various groups involved—the Interministerial Committee, the Coordinating Committee, project staff, and the people themselves—seem to be insufficiently coordinated with each other.

Is this to say that the Tin Aicha Project has failed or runs the risk of failure? That is not our intention, still less our opinion, in spite of the skepticism of many people. For proof, we need only cite the optimism of the villagers themselves, which was described earlier.

It is true that the people of Tin Aicha live in a different psychological environment. All around, other people (including Government officials) treat them now and then with a certain amount of disdain as the "disaster-struck refugees." Keep in mind that for almost everyone this word has a very pejorative implication: the nomads, whose sense of pride has already been described, are very sensitive to such affronts. They are deeply hurt, even scandalized, by everything which ironically reminds them of their economic insufficiencies. The term "refugees" brings to their minds bitter memories of the welfare camps where they

had the impression of living as beggars. The term is even more shocking when it comes from their fellow citizens or their relatives.

This pettiness could be attributed to a sort of jealousy (whether conscious or not) felt by those who are not enrolled in the project. Might they not be envious of "these people whom the Government and an American organization overwhelm with their favors—obtaining for them fields, livestock, and medicine?" As we have said, these are psychological factors, apparently harmless, but which might slow down or jeopardize the commitment of the people to the project—and factors which a judicious campaign carried out in the *arrondissements* of Raz el Ma, Gargando, Bintagoungou, and Farach might wipe out. Besides, the inhabitants of Tin Aicha note with satisfaction, "Those who call us refugees do not hesitate, paradoxically, to accept our hospitality when they pass by our village and even accept things which we offer them freely."

In spite of all that, the Tin Aicha Project seems to us a positive experiment, an experiment which can turn into a real success if the needed adjustments are made in a careful and rational manner.

In all the areas with which the project has dealt (agriculture, livestock raising, education, and health), there have been positive changes. Many prejudices have been done away with, especially those which formerly surrounded questions of agriculture and health. Before drawing their own conclusions, many of the villagers applied, perhaps unconsciously, a principle which is dear to anthropology, namely that of submitting action to the criterion of experimental verification.

In fact, does not the criticism which the people have brought against the project (the insufficiency and the infertility of the land, bad management of the livestock and the pasturage, insufficient participation in the solution of problems by those directly concerned, for example) constitute a proof of its solid foundations? The people seem resolved to settle down for good, but insist on bringing to the attention of the project the different points where the saddle chafes. They feel that the dispersion of energy and personal identity which characterized nomadic life—and constituted for them its least desirable side—has given way to better management of their human potential and to a social unity which can be better grasped because it has clearer outlines. The citizens of Tin Aicha make no mistake about the advantages which they have drawn or will be able to draw from this project, compared to their former status. Their faith in its success is clear and unalloyed.

This note of optimism is supported by another factor which is not negligible: sixty-seven per cent of the families belong to the *cercle* of Goundam. They are, therefore, families which already have some penchant for agriculture—families which, by virtue of their size and social influence, will be able to help crystallize the motiviation of those others who, before Tin Aicha, knew nothing but the great migrations of the nomadic herdsman's life; those whose skepticism and resistance conse-

quently still represent an obstacle. The influence of the 104 families who are native to the area should be used to the best advantage in order to bring along those who are hesitant.

It is also time to prepare the population for self-sufficiency, since the ultimate goal of outside financing is that it be no longer necessary. In order to accomplish this, the people must become more and more the directors of their own destiny in order to take complete charge of their affairs at last. The impression they have had hitherto of not being given responsibility for the development of their new community must be banished. In this way, we can help them concentrate their attention and energies on developing a more communal style of life and on smoothing out the sharp edges of the individualism—often acute—which characterize property arrangements in nomad society.

Construction of permanent buildings for the school and the cooperative store will help overcome the impression of a precarious existence which the temporary shelters create in the two villages. If the cooperative store can be reorganized with a board of directors correctly and judiciously chosen, its proper functioning will give more stability to village life and solve the most urgent problems of supply. It would then be possible, and even advisable, to add to the activities of the cooperative store training sessions in practical home economics, particularly lessons in harvest management and family budgets.

The inauguration of a weekly market would doubtless give a new sense of identity to Tin Aicha by making it a center of attraction for the surrounding area. If properly handled, this initiative could at one and the same time favor the development of the community, open up and balance its economy, and help overcome the prejudice and disdain which still charge the atmosphere roundabout.

If people are trained in first aid and midwifery, the progress already made in matters of health and hygiene can be consolidated. But there may be a precondition: namely, new village organizations for women and young people in order to provide a framework for their activity and a means for their contributing their best to the community.

In this regard we agree with a report of the United Nations which stated outright, "Development can only arise from the heart of each society. It is based on what the human group possesses: its natural environment, its cultural heritage, and the creativity of the men and women who make it up."

Making the changes we have discussed in the methodology of the project, involving village people in the solution of their own problems, and giving them progressively more responsibility so that they become the authors of their own development: such appear to us to be the measures which will confirm the success of Tin Aicha and prove, for the first time in Mali, that it is indeed possible to settle nomadic peoples—*but not in haphazard fashion!*

A LOCAL VIEW OF TIN AICHA IN 1980

By Oumarou ag Mohamed Ibrahim
Director, Tin Aicha School
(Translated from the French)

A Village Born of the 1974 Drought: Tin Aicha

The village of Tin Aicha is a grouping of formerly nomadic herders, disinherited by the terrible drought of 1974 which destroyed their livestock. The calamity pushed them together and into begging in the cities of the former Sixth Region (that of Gao, now divided into the Sixth and Seventh Regions). The journey of these herders, some of whom had never known village life, led them to areas where hope of aid was strongest. Goundam, the breadbasket of the Sixth and Seventh Regions, thus welcomed many nomads from outside its borders, while other *cercles* cared only for their own populations. The stricken families were first settled in the town of Goundam, where the administrative authorities distributed food and medicines to them. The last year of the drought, in May 1974, however, the Goundam refugee camp was closed. The Government granted seed-grain stocks to those familes who could return to the cultivation of their fields. Many of the refugees, however, had no land, and this group was transferred to Tedaine (and not to Tin Aicha, although this area two kilometers east of Tedaine gave its name to the village). The site of Tin Aicha evokes for the populations of Lake Faguibine the troubled period, precolonial and colonial, of brigandage and slaveraiding by Moors from the far north, who were only defeated by the *maraboutic* and warrior group of the region, the Kel Antessar, sovereigns of the lake and its protectors from outside attack.

The transfer of refugee families to Tedaine, or as we may now call it, Tin Aicha, resulted from cooperation between the Government of Mali and a private U.S. organization, the AFSC or *Service Quaker*. This organization undertook the rehabilitation of the drought-stricken families, providing them with livestock, with a school, a dispensary, and the embryo of social services. The Malian Government granted the families arable land, a two-kilometer stretch from the *arrondissement* of Raz el Ma. An agricultural agent joined the village, charged with teaching his craft to families who knew nothing of farming. No less important was the arrival of a social worker who worked with local women in infant nutrition and in dyeing and weaving.

These services formed the keystone of Tin Aicha. In examining them more closely, we can uncover the present-day reality of the village.

The Village

The village, created of 100 families transferred from the Goundam

The previous numbered page in the original document was blank

refugee camp, owed its early development to Government food aid, which continued for the first two years of its existence. To this necessary aid was added a livestock grant (cattle and sheep) and the distribution of arable land, both of these in proportion to the size of families.

The choice of animals purchased, their individual quality, and their breed remains a debatable point. Most families agree that the sheep was not an animal they would have chosen. They argue that a sheep costs twice as much as a goat (and therefore would have preferred two goats for each sheep received); and that a sheep is considerably more demanding of water and pasturage and considerably more susceptible to disease than a goat, which can live almost anywhere, under almost any conditions, and which gives birth twice a year.

The quality of the animals distributed also is criticized. Early purchases included many aged and dry cows. In redressing this error, another was committed: later purchases included calves of a year or two who would not reproduce for up to three years. This error might have been avoided had the population itself been involved in the choice of animals.

It is thus that many of the distributed calves did not reproduce until the end of the livestock reimbursement period, forcing their owners, in necessity, to sell them without profiting from their offspring. In the First Village, however, families had four years between distribution and reimbursement, and there one can find families granted three cows and three sheep who have now twelve cows and fourteen sheep. Had the Second Village been offered another year before its reimbursement, its families would have profited more fully from their animals, and the reimbursement itself would have been more remunerative, because the sum demanded was proportional to the number of animals held. Thus the village as a whole would have gained.

Differences can be noted in the distribution of land as well. The families of the First Village gained two meters of farm land per member, while those of the Second Village only received a meter-and-a-half. The length of the fields depends upon the flooding of the lake, but the land is in any case insufficient to allow self-sufficiency in grain. The people of Tin Aicha are more attached to their land than to any other possession. They have never ceased to press for expansion of the village fields. The greatest punishment conceivable is the forfeiting of one's field. It is, however, to be noted with regret that a third of the First Village's fields have been given over to tenant farmers, and that their owners have turned to other occupations more remunerative and less demanding. This practice is especially common among the Moors, who have generally sold all of their livestock and purchased donkeys, which they see as an endless source of profit. With their donkeys, they travel far from Tin Aicha in search of gum arabic, which they then sell in distant markets. With their profits, they buy millet in the markets of Lere and Soumpi for resale at Tin Aicha. In this way they can support their families until the harvest season, which, given the lack of land, produces

only under ideal conditions about six months of food for most of the villagers.

It is agreed as well that the inhabitants of the Second Village are less socialized, less well adapted to village life than those of the First Village. Their rehabilitation, moral and material, is a year younger than that of the First Village, and many of the young of the Second Village remain adventurers with little understanding of the demands of village social life. This difference is particularly evident in the care of communal property, which commands considerable attention in the First Village but almost none in the Second, where the spirit of individualism remains too strong. The political and administrative officials of the two villages, responsible for civic education, have continued to exhort the population, however, to greater efforts in the management of its communal property. Many Tin Aichans remain nonetheless unconvinced that the FGR and the cooperative herd are in fact their property. They feel these holdings to be temporary and thus to be turned to good account in the shortest time possible fearing each day that they may lose them. The longer they do retain management, however, the more easy it becomes for them to accept that they are, as a group, owners.

The School

Created in May 1975, the Tin Aicha School is in its sixth year of existence, and each year has brought the opening of a new class. It is a boarding school, in that the students are provided three meals a day. There are now 189 students in six grades, 99 per cent of them nomad children. The effort brought to the creation of the Tin Aicha School is all the more praiseworthy when one realizes that no other school in Mali has more than ten nomad children. The school compound now includes six classrooms, an office, a storeroom, and four toilets, and the construction of teacher housing is planned for the near future. Teaching is in French, with an hour a day of Arabic in each class. Both teachers and students give of their best, and both have been praised for their efforts in each annual inspection by the Government Education Service. All of the work of the teachers has been toward the year 1979-1980, which will present the first graduating class for primary-school-leaving examinations. Tin Aicha's school has five French teachers and one Arabic, all from the Sixth Region, but one who is from the Region of Sikasso and who is responsible for the school's ruralization program.

The ruralization program owes its equipment to the World Food Program, which has sent plows, oxen, and other farming materials. Where, however, will these be used? The school garden is currently between the school compound and the well of the Second Village. It would be of great value were water available in sufficient supply, but the village well cannot support both the population and the school garden. Students spend too much of their time drawing water for their tomato, potato, carrot, and onion crops. The school director, realizing the problem, has asked the village for a part of the collective field, on the lakeshore, 1,500 meters from the school. There the students can, with little

difficulty, learn modern agricultural methods.

Despite their hostility to Western education in general, the parents of Tin Aicha have supported their school and have assured a high rate of school-going among their children. Their only fear remains for the future of their children after six years of schooling at Tin Aicha. Will they abandon the middle schools of Goundam and Tonka, as their older brothers and sisters have done, because material and moral necessities are not available in these towns? Will they become, like their older brothers and sisters, a drain on family resources, knowing neither farming, nor herding, nor any other lucrative activity? They have lost the life of the peasant and the herder, but they have not gained the life of the civil servant. They have become a sore on the family, remaining attached to it, but providing nothing to it. To avoid these problems, the village of Tin Aicha has asked that a middle school be created locally to serve the primary schools of Tin Aicha, Raz el Ma, Gargando, Farach, and Tilemsi. The parents of these students move around the lake throughout the year or are permanently fixed on its shores, and they are all in favor of a middle school which will not remove their children from their homes and their care. The creation of such a school would have a major impact on the education of a group which has too long considered school-going the source of laziness and uselessness.

The Dispensary

Created at the same time as the school, the dispensary of Tin Aicha began life in a straw mat building, equipped with the essentials of a rural infirmary. First the responsibility of the AFSC, the dispensary since late 1977 has been supported by the *cercle*. This change has meant a severe cut in the materials and medicines available for the treatment of the most common local diseases: headaches, fever, malaria, colds, wounds, eye and ear infections, ringworm, and rheumatism. The area which the dispensary serves is vast, covering all of the north shore of the lake, villages, and nomadic groups. But the last years have seen a rise in epidemic diseases due to the almost total lack of medicines at the dispensary. The nurse spends a good part of his time in Goundam, having nothing at hand at Tin Aicha to treat the sick. The Tin Aicha population has thus asked that one of their number be trained as a village health worker to replace the nurse during his absences. The population has also requested that the FGR take part in the health services of the village, ordering medicines which can then be bought at the cooperative store. The FGR, however, must consider its balance sheet, and it has found in the past that medicines requested are not always bought. The president of the FGR thus works with the nurse, planning before each visit to Goundam the medical purchases necessary for the village.

The population has also asked that a midwife be trained for the village, where many of the women suffer from complications in childbirth. They suggest that such a midwife be well versed in traditional as well as

181

modern medicine, given the continuing problems in stocking pharmaceutical products. The midwife would be paid by the women using her services and would thus be no drain on village resources.

An early project error was in not giving some medical training to the village social worker, whose early work in infant nutrition has almost ended, and who now works only in the women's handicrafts groups. This work, however, is not to be slighted: the women of Tin Aicha are now excellent dyers, producing a source of revenue which sells very well on local markets.

The Tin Aicha dispensary now has new quarters, a solid building with various treatment rooms. The population wishes for nothing further than the continued restocking of this dispensary in medicines.

The *Federation des Groupements Ruraux*

The Tin Aicha FGR grew from starting capital granted by the AFSC and is housed in sales- and storerooms built by the same organization. The FGR is run by a permanent staff of two, manager and guard. The manager, a member of the Tin Aicha population, was chosen by the village for his honesty and his assiduity, and the guard, also a Tin Aichan, for his inherited detective skills, which allow him to identify a person by the mark of a single toe in the sand.

The importance of the FGR to Tin Aicha and to all of North Faguibine is evident when one compares its prices to those of local markets. Its impact would be even greater were it able to assure a supply of staple goods in all seasons.

The FGR also manages a collective cattle herd, the profits of which are at the disposition of the village. The population has suggested, however, that the cows which make up the herd should be replaced by steers, whose sale in southern markets substantially would increase cooperative profits. This system would allow the collective herd to escape the effects of continuing drought. The profits from sales could be used to finance a herders' cooperative, allowing Tin Aichans loans for private herd reconstitution and a joint system of sales to distant and even foreign markets.

There has thus been considerable investment at Tin Aicha. But is it a village? Is the population stable? What measures can make it so?

Tin Aicha is not yet an officially recognized village, despite its existence in the *arrondissement* of Raz el Ma. The *chef d'arrondissement* concerns himself with the Government services working at Tin Aicha, but local administration is beyond his responsibility, because Tin Aicha's families are not on his census rolls. The village, understanding the difficulties which its situation poses, has requested that it be officialized, noting that it already contains all of the structures necessary and a population of more than 1,000 persons. To date, the request has not been acted upon. But, while Tin Aicha finds itself in an anomalous position administratively, it is politically an important part of the *arrondissement*. Tin Aicha has its *Union Democratique du Peuple Malien* (UDPM)

political committee, its committee of the youth movement, and its women's committee. At the *arrondissement* level, the subgeneral of the youth movement and other members are from Tin Aicha. These political posts prove the dynamism of the Tin Aicha population and show that decision making in Raz el Ma requires the participation of Tin Aicha as well as the other villages of the *arrondissement*. The success of Tin Aicha's political organizations also has had an important impact on the life of the village itself.

In speaking of the stability of Tin Aicha's population, it must be recognized that Tin Aichans are subjected to the same needs as other Faguibine populations and that these needs often keep the local population in movement. One can affirm, however, that the economic necessity which renders complete stability impossible nonetheless will keep more than half of the population at Tin Aicha at any given moment. This percentage compares favorably with that of Raz el Ma, the *arrondissement* center, which has today only about ten per cent of its original population, the rest having left for more economically promising areas.

Several points seem necessary for the continued stability of Tin Aicha. Its civil servants must be well chosen, honest, and caring of the future of the village. This is particularly true of the school teachers, who must command the trust of village parents if school-going is to remain successful. And its success will be the success of Tin Aicha, because the parents will not abandon their children and will work to make the village, their home, prosperous and self-sufficient. In a climate of security and tranquillity, with sufficient goods for their children and for themselves (the assurance that the FGR will always be able to provide grain and other staples), the population of Tin Aicha will settle permanently.

Welcoming Address for Louis Schneider
AFSC Executive Secretary
January 6, 1978
Tin Aicha

To the Director General of the Quaker Service
The Cabinet Chief of the Ministry of Rural Development
Honorable Guests
Ladies, Gentlemen

In the name of the people of Tin Aicha, we wish you a warm welcome.

We wish to express to you and your delegation our profound gratitude and our profound appreciation for the interest you have granted and continue to grant to these people who have suffered so much during the drought.

As the spokesperson of all the people present here tonight, I wish to express to you our sincere thanks for our recovery, our development, and in a word, our material and moral well-being. You have enabled us to recover our dignity which famine and all the miseries which followed took from us.

Through your charitable and humanitarian action, the name of Mademoiselle Eva, your representative, will long be engraved in the memories of those who only yesterday were the objects of public derision and today begin to stand on their own two feet. It should be underlined that despite extremely difficult living conditions Mademoiselle Eva never ceased giving the best of herself to bring to reality your wish, and that of our country as well, which was to make the inhabitants of this village people who are regarded with admiration by their fellow citizens.

We ask you, honorable guests, to be our faithful interpreters to our country and the Quaker Service to bring witness of our profound gratitude.

On the occasion of this memorable evening, we offer you this evening of entertainment.

Abdou Samad Ag Habib
(Tin Aicha School Director)

INTERNATIONAL DIALOGUES IN WEST AFRICA B. P. 971, LOME, TOGO

Report of an International Seminar on "PARTICIPATION OF NOMADS IN DEVELOPMENT" held at Haoussa-Foulane, near Gao, Mali from 14 to 21 March 1976

INTRODUCTION

Since 1963, the staff of the International Dialogues in West Africa—a program sponsored by the American Friends Service Committee (AFSC), the Friends Service Council, London (FSC), and the Canadian Friends Service Committee (CFSC) — have organized conferences and seminars in West Africa. These are very informal gatherings which aim at promoting communication, understanding, and friendship among people of different backgrounds, languages, cultures, and religions, who come from the fifteen countries which comprise the West African Region. The emphasis is on open and free discussion—true dialogue—in order to gain a better understanding of the common problems which face the countries of this region in their struggle for development and to suggest solutions to such problems.

This was the third in a series of three seminars on development problems in the Sahelian areas, which were organized for the five Francophone Sahelian countries of West Africa: Mauritania, Senegal, Mali, Niger, and Upper Volta. The two previous seminars of this series were held at Ayorou, Niger, in April 1975, on "Man and His Environment —the Sahel," and at Lome, Togo, in July 1975, on "Social Structures and Economic Development in the Sahel."

Considering the theme of this seminar, "Participation of Nomads in Development," it was felt that it was essential to invite true nomads to participate in the discussions and therefore that it was necessary to hold this seminar in a nomad area of one of the Sahelian countries and not in a city. Authorization was obtained from the Malian Government to hold the seminar in the Sixth Region of Mali, i.e., the northeastern part of the country which is mostly desert and the traditional nomad area, and an appropriate site was found, forty-five kilometers south of Gao, on the Niger River, near the village of Haoussa-Foulane. There the women from nearby villages built a camp made of fifteen Sonrai-style hemispherical straw huts and one large hanger for meetings. This was

The previous numbered page in the original document was blank.

an ideal setting for a nomad seminar. Food supplies were brought from Gao and meals prepared by village women; water was plentiful in the river; the stars and petrol lamps provided light.

The twenty-seven participants at the seminar came from Mali, Niger, and Senegal. Mauritanians did not answer invitations to the seminar, and the six participants from Upper Volta were prevented from coming at the last moment. There were seventeen nomad participants (twelve Tuareg and five Fulani), most of them chiefs of their tribes or clans, and ten sedentary participants — civil servants (educators, development workers, planners) and researchers.

This summary report of the discussions was written by participants and staff of the International Dialogues. It is followed by some comments by the staff. The report is distributed to the participants, to ministries and Government agencies of the Sahelian countries, and to private agencies and individuals concerned about development in the Sahel. The theme outline or program for the seminar on which participants based the agenda they adopted, precedes the report. A list of background papers prepared for the seminar (in French only) is attached to the report, as well as the list of participants.

SUBSTANTIVE DISCUSSIONS

Before the seminar, an outline of the theme had been distributed to all participants (except those who do not read), together with the seminar announcement. Following is the theme outline or draft program. It should be mentioned that we emphasized during our contacts before the seminar that this was not an agenda and that participants decide on an agenda at the seminar, based on this outline and on any further points they feel should be included.

THEME: "PARTICIPATION OF NOMADS IN DEVELOPMENT"

Nomads are an important and very characteristic human element of the Sahelian regions. They have their own lifestyles, traditions, social structures, and activities. They have been seriously affected by the recent drought, which caused a lot of suffering and upset their way of life. This has led some people to doubt the viability of a nomadic life and to think that nomadism is doomed to disappear. The object of the present seminar will be to analyse the consequences of the drought on nomads, the problems arising from the continuance of a nomadic life and economy, and the future of nomads.

1. Consequences of the Drought on Nomad Life

The drought has upset the very base of nomad life. What lessons can be drawn from it? Is it right to say that the veterinary health campaigns conducted by colonial and postcolonial administrations for the development of Sahelian countries have resulted in an increase in herd size far beyond the capacity of pasturelands in the Sahel? What can be done in order to provide new means of subsistence to nomads who have lost

their herds? Is herd reconstitution through regional cooperation possible?

2. Sedentarization of Nomads

Quite a number of people think that the only future for nomads lies in sendentarization. Do nomads themselves wish to settle down? What are the problems raised by sedentarization? Is it possible for nomads to entirely change their way of life and culture and to adapt to a sedentary or semisedentary life? What are the alternatives open to them if they can't or do not want to switch to a sedentary life?

3. Participation of Nomads in Economic Development

Traditionally the economic activities of nomads were not directed towards monetary profit. They used to exchange cattle products and sometimes their animals for goods they could not find in their environment, when they felt the need to do so. Is it, therefore, advisable or possible to try and encourage their integration in a more and more monetary-oriented economy? In the long run, does this economic system offer them a better life within the scope of their countries' national development? It is argued that in order to participate more in economic development, nomads should proceed to intensive rather than extensive livestock breeding, i.e., that they should aim at quality rather than quantity. There is also a need for equitable systems for the marketing of cattle; the existing communication infrastructures need to be improved and new roads should be built in order to convey the herds towards the markets and consumer goods towards villages and camps. All this would require human and financial investments. How can nomads participate in such changes and how can one ensure that they will benefit from them? It has been argued that a change of mentality is necessary for development. But is it the mentality of nomads or that of technicians and planners that needs to change in order to ensure the success of development efforts?

AGENDA

The Steering Committee adopted an agenda based on the theme outline presented by the staff. Although the three major points of the outline seemed to meet with the approval of the majority, it was clearly understood that the Committee could amend the agenda any time during the week, if necessary. No major change intervened, however, and the discussions followed the agenda reproduced below:

1. The consequences of the drought:

What lessons can be drawn from the drought?

What can be done for the nomads who have lost their herds?

2. Sedentarization:

Is it possible? Is it wanted? What problems does it entail? What are the alternatives?

3. Participation of nomads in economic development:

Is it advisable and is it possible to integrate nomads in a more and more monetary-oriented economy? Will they be assured of getting a better life in the new system? How can nomads participate in the changes necessary to promote their development?

I. THE IMPACT OF THE SAHELIAN DROUGHT ON NOMAD LIFE

Participants analyzed the impact of the recent drought on the nomads' socio-economic environment in great detail. This analysis proceeded from a global approach with discussions not centering on a single "privileged" aspect, either geo-climatic, or sociological, or economic, but on all aspects.

From these discussions it appears clearly that nomad society has been shaken down to its deepest roots by this last drought. It was shaken in its material foundations, first of all, because of the drastic reduction of herds and pasture, but also by a severe drop in agricultural output in those areas where ecological conditions allowed for a mixed livestock-agriculture economy. Nomad society has been shaken also in its social structures; relationships between members of society and between members of families have been upset. Poverty has brought all people down to the same level: chiefs and slaves, white nomads and Black nomads. Moral values have been abandoned; e.g. the theft of cattle among relatives, friends, and even among strangers (which is rare); there have been marriages without dowry. Sons-in-law who, out of respect for their parents-in-law would never have slept in the same camp as the latter, have sometimes been forced even to eat out of the same dish. Young couples, just married, have been forced to separate, the men leaving with the cattle and sometimes being unable to find their wives when they returned. Many children have been abandoned, some of them becoming beggars in the towns. These are examples of the many cases without precedent or extremely rare before, resulting from the great drought.

That there is a close relationship between the material foundations of nomad society and its social structures was often shown throughout the discussions. The *Weltanschauung* within nomad society was subjected to criticism; the desirability of nomadism in its traditional form also was questioned. Some stressed the need for a relative kind of sedentarization. Others wondered whether the acceptance by nomads of some forms of "modern" economic activity (employment as construction workers, factory workers, etc.), and even schooling would be a positive way of ensuring some security for those whose situation is precarious.

This short report intends to emphasize the global set of problems which formed the essential theme running through our discussions. The global integrated approach, or the study of the factors composing the social structure of society, however, was not simply an academic necessity. The fact that nomads faced with the difficulties resulting from the drought adopted such a global approach in their analysis of the situa-

tion shows that it is at the same time a fundamental prerequisite for any activity aimed at improving the standard of living of our people.

Another point which was made clear through our discussions was that not all the difficulties now facing the nomads are the result of drought. A glance at the history of the Sudano-Sahelian areas shows that, in spite of the climatic constraints, these areas were the home of brilliant civilizations and had managed to survive previous droughts. The integration of nomad society into the world economy, for one, eliminated the economic basis of trans-Saharan trade. This economic integration and the general trends of the world economy have caused an irreversible regression in nomad societies. Having said this, we may summarize the discussions under two main headings: Economic and Human Aspects and Changes in the World Outlook of Nomads.

A. Economic and Human Aspects

1) Livestock: The drought caused a tremendous loss of livestock. Some nomads who had several hundred head of cattle are now totally destitute. One of the participants told his own story as an example: out of more than 300 cattle only 30 survived the drought. Losses reached enormous proportions in many areas. In some places all the cattle died, leaving whole families in subhuman conditions. For nomads who have no possibility whatsoever of any other economic activity, the loss of their cattle means the end of hopes of a better life or simply of life.

According to several speakers, previous droughts were not as devastating as this last one. Also, the number of cattle had greatly increased following veterinary progress reaching the most remote areas. In spite of this increase, which already posed increasingly difficult problems of pasture management and of coexistence with other groups, especially with sedentary farmers, the attitude of nomads regarding their cattle had hardly changed. This can be explained by the importance of the climatic factor in Sudano-Sahelian stockbreeding. Nomads would try to possess the greatest possible number of cattle in order to "insure" themselves against possible bad years.

Thus, when drought struck the Sahel, grazing lands, which already were insufficient to support the growing herds of cattle, were reduced to a minimum. This caused the vast migration of herdsmen and their cattle in search of pastures. If one further considers that the physical resistance of animals and people had been diminished by three consecutive years of drought, one finds an explanation to the higher proportion of livestock killed by the last drought. Since nomads get their subsistence from stockbreeding alone (milk, cheese, curdled milk, hides, all of which are consumed and exchanged for cereals and manufactured goods), the loss of their herds simply meant famine for them and caused the unprecedented exodus towards the towns.

2) People: It is possible to divide the drought victims into three groups:

(a) Those whom the drought caught in remote grazing lands, most of whom died, as they were too far from any watering points.

(b) Those who were able to move to the nearest urban centers. However, during their exodus, many men were forced to abandon their wives and children. Some participants explained that they still now were caring for children whose parents had not yet returned or had not been found. It should be noted, however, that most of those who migrated to towns or relief camps have returned or are returning to their places of origin. Nevertheless, a large proportion of the young men, especially, have remained in the towns to find a job or keep a job they found.

(c) Those who managed to save something. They usually did not leave their normal grazing areas. All participants agreed that this group is mostly composed of nomads who had a relatively small number of cattle—ten to fifteen head.

B. Some Indications of Changes in the *Weltanschauung* of Nomads

1) Sedentarization: The memories of the drought are still too vivid for definite conclusions to be drawn from the various statements made by participants. Yet it is symptomatic that all the nomad participants were in favor of some kind of semisedentarized nomadism, i.e., nomadism within a limited geographical area. What is clearly new, and it is important that planners draw all the conclusions from it, is that participants all rejected the kind of "great" traditional nomadism which prevailed before the drought. Nomads are now ready to accept new and orginal ways of promoting their own development and well-being.

However, it seems clear that a laissez-faire attitude and a few consecutive good years can bring back old habits. The discussions about a possible return to "great" nomadism show that the temptation to fall back into old traditions of "free roaming nomadism" cannot be discounted.

Among those nomads who live in areas where agriculture is possible, some have decidedly opted for a sedentary life based mainly on farming. Most of the participants coming from such areas were in favor of a diversification of economic activities, including some kinds of "modern" activities (industry, road building, etc.) which would act as a safety valve in case of possible natural disasters.

2) Schooling: Traditionally, nomads were always opposed to sending their children to school. Some participants pointed out that this opposition mainly is due to the fact that nomads jealously want to protect their freedom and not to a feeling of rejection of a foreign culture. Indeed, there is already a perceptible influence from the outside world on clothing, food, and some manners. With regard to schooling as well as to new economic activities, the time is now ripe for innovations among the nomads. Several participants spoke in favor of sending their children to school, as this allows those who have been "schooled" (they did not say educated) to get a stable income (through employment). The experience of the past years has shown that those families who had at least one salaried member were able to resist the drought better than others. What is interesting in all this discussion is the clear sign that there is an

opportunity for action aimed at strengthening this new mentality towards school.

Another result of schooling was also discussed, namely, that it allows those who have benefited from it effectively to participate in the life of the country. Once they have been through schools, the nomads themselves will be able to raise their problems and difficulties and to discuss them with planners and Government officials. With adequate training it will be possible to reject the present way of dealing with such problems, which is to raise and to solve the problems of nomads without their participation in the drafting and definition of projects which affect them.

3) Cooperatives: The question of cooperatives and cooperation in efforts to promote development among nomads was discussed at length. It is clear that most participants were in favor of cooperatives. Nomads have understood that the present situation, where each individual reacts separately to such accidents as droughts, can only contribute to the risks and dangers and lead to the kind of disaster which they have suffered. Cooperation as a form of collective defense, no doubt, has many positive elements. At the moment, cattle raisers' cooperatives (mostly in Mali) are still in their initial stages, which means their main objective for the time being is still herd reconstitution. It is a known fact, however, that cooperatives can strengthen existing retrogressive social structures and be a strong factor of social distortion, blocking mechanisms of social evolution. It is therefore desirable that, as the cooperative system develops in nomad areas, priority be given to careful sociological analysis of projects and their expected effects over the hasty implementation of production means (livestock) only.

II. SEDENTARIZATION OF NOMADIC PEOPLE?

Sedentarization is no more of an aim in itself than is nomadism. They are lifestyles and living habits commanded by economic and ecologic conditions. Such conditions can change both in time and in space. What is important is that people should be able to live decently off their work. For some, farming and other activities force them to settle in one place. For others, pastoral and other activities force them to move more or less frequently.

After the drought, some nomads who had lost all their cattle settled in towns because they were forced to. Others are starting to live off farming. All participants agreed that it is desirable to promote a mixed economy of agriculture and stockbreeding wherever this is possible. The participants from Tin Aicha, on Lake Faguibine, in Mali, where nomads are now working fields, believe that this kind of association of agriculture with stockbreeding is irreversible: "To do only stockbreeding is to stand on a single foot; to till the field *and* raise cattle is to stand on both feet—there is less danger of being toppled over."

Of course, agriculture also has its risks (bad weather, various pests, etc.), just like stockbreeding. But by diversifying the sources of income,

agriculture allows those who practice it at the same time as stockbreeding to better face the future and possible droughts. It is in this spirit that some cattle raisers would like to till the land without suddenly breaking off with stockbreeding.

Nevertheless, participants admitted that agriculture is not possible everywhere. Away from the (Niger) river banks, from lakes and large ponds *(mares)*, it is very hard to find suitable areas for cultivation, because of the unfavorable ecological conditions and lack of sufficient rainfall. Therefore, the nomads of such areas can hardly envisage any other activity than cattle breeding. They do not see what else they could do for any length of time: "If we give up cattle raising, it is as if the river dried up....We would be of absolutely no use to the country, in fact we would even become a burden for the State. We have nothing to reproach cattle breeding; its advantages are enormous. It is through cattle that we live and we pay our taxes. Our relations with the rest of the world all go through cattle breeding."

Nevertheless, these nomad herdsmen recognize the need for changes, after having gone through the catastrophe which struck them. They admit that if they had been better organized, especially in management of grazing lands, the consequences of the drought would have been less dramatic. They believe the future of cattle raising now lies in the nomads organizing themselves into cooperatives.

One of the participants concluded: "If disaster strikes us again, it will find people better prepared. Where agriculture is not possible, cattle raisers will be able to resist better by organizing themselves into cooperatives."

III. PARTICIPATION OF NOMADS IN ECONOMIC DEVELOPMENT

The question of participation in development was already approached during discussions on the lessons to be drawn from the drought and the possibilities of sedentarization. Nomad participants repeatedly said that the various solutions envisaged to prevent future disasters—such as the organization of livestock raisers into cooperatives, the combining of agriculture and livestock raising wherever this is possible, the diversification of economic activities, and also school attendance of their children, to a certain degree—are all means which will allow them, first of all, to ensure a subsistance base and, later on, to produce an economic surplus which will lead nomads to contribute to the economic development of their countries.

The discussions highlighted several aspects of the issue of participation in development which can be summarized under the following subheadings: Regional and Interstate Cooperation, Drafting of Development Programs, Intensive/Extensive Livestock Raising, Difficulties of Livestock Raisers' Cooperatives, Livestock Marketing Mechanisms.

1) Regional and Interstate Cooperation

The Sahelian disaster does not mean the end of nomad cattle raising, but it has raised questions about the nomad system of using the environment. Participants clearly understand this, as was shown by their interventions which all call for a more rational organization of the production system and for a change in mentalities.

The idea of setting up livestock raisers' cooperatives generated great interest and enthusiasm, both because cooperatives would allow many poorer nomads to return to the only activity they really know and like, and because of the possibilities of a better future they offer through a more rational management of grazing lands and of cattle commercialization. The experience acquired by the nomad participants from the Sixth Region of Mali, who have already set up such cooperatives, contributed to strengthen such feelings. One nomad participant said that the organization of herdsmen into cooperatives gave them a greater bargaining power on cattle markets, since the larger size of a single cooperative herd allowed them to push for more equitable prices.

Another interesting aspect of regional cooperation which participants discussed is the use of pastures of one area by herds coming from another area and, as is frequently the case, from another country. The representatives of nomads' cooperatives present at the seminar explained how they dealt with this problem: They said "since the sun shines for all," it is important that herdsmen should be free to take their herds anywhere in search of good pasture and to let them graze on "foreign" pasturelands on their way to the *cure salee* (salt cure). But it is equally important that herdsmen who are not from one area respect the rule which groups of nomads, such as cooperatives, have set for the exploitation of specific grazing lands, e.g., the number of cattle to be authorized on a certain pasture, the rotation system when it exists, and the kind of grass which is always reserved for the local population. However, participants pointed out that this problem was not a cause for worry, since nomad herdsmen are usually very well informed about the conditions of use of pastures. Before they move herds somewhere they enquire about the availability of pasture and water and agree with other groups already using the land on the terms under which they can graze there. A group of nomads must always keep the option of moving to other areas open and, therefore, cannot exclude other nomads from doing the same.

As regards interstate cooperation, nomads have frequently complained about the customs constraints (e.g., transhumance certificates, guarantee deposits, etc.) which are imposed when they want to go from one country to another. Cooperation among the States in this matter would allow nomads to draw greater benefit from their herds. There is a beginning of cooperation between Sengal, Mali, and Mauritania, within the OMVS, a subregional development organization. These are efforts to transform the Ferlo area in Senegal into a "birth area" for cattle which

will then be taken to other "fattening areas."

On the other hand, herdsmen are also to blame for a lack of cooperation among themselves. For instance, Malian herdsmen go individually to cattle markets in Niger where they sell their cattle at very low prices to middlemen, who take the cattle to fattening ranches in that country. Also, the lack of agreement between States explains why well-digging projects have been carried out with the more or less implicit intention of attracting the people and herds of neighboring countries. Interstate cooperation is indispensable to harmonize policies with projects aimed at improving the standard of living of nomad peoples.

2) Drafting of Development Programs

It is encouraging to note that all the ideas about a change in mentality or outlook of nomads were introduced into the debate by the nomad participants themselves in a remarkable atmosphere of general self-criticism. "The only thing we know how to do is cattle raising and it is only through this activity that we can contribute to development. But we must understand that what was possible before no longer is, that we no longer have the basis to start on that we had before the drought, and that is absolutely necessary if we want to develop. One cannot develop by consuming one's capital (cattle). We need to look at things in a new way. With such a new mentality and the appropriate assistance from development cadres to help us solve technical and organizational problems, we can develop. The best way to proceed for this purpose is that the development cadres come and consult us and try to understand us. A good understanding and collaboration among the cadres and ourselves is necessary. However, collaboration must begin among ourselves."

As was stressed by one participant, too often development cadres think *for* the peasants and it is too late when their mistakes are realized. He gave the example of a milk processing plant near St. Louis in Senegal. At the time plans were drawn up for the plant, the site chosen was in an area of active cattle raising, but in the meantime herdsmen had been squeezed out of the area and substituted by farmers brought in for a large agricultural development scheme. The planners ignored this because they had not taken the trouble of consulting the local population.

In the end, when the plant was installed, it had to operate with imported powdered milk for some time before closing down completely. Another example is what might be termed "faked cooperation," i.e., planners and cadres decide on a project and then go to discuss it with the people concerned who in general will simply approve. These two examples clearly show the kind of methods that have often led to the failure of development projects for lack of true participation of those who are supposed to benefit from them.

3) Intensive vs. Extensive Livestock Raising

Participants denounced the use of the terms "intensive" and "extensive"

in the Sahelian context as a foreign terminology introduced by people who referred to their own experience in Western Europe. One participant eloquently demystified this false problem of terminology by putting terms in their proper context. "The words 'extensive' and 'intensive' are a false problem. In our environment, if there is enough water and pasture, there is no reason why we should not have big herds of good quality." Using the controversial adjectives with the meaning they are normally given, one might add that, because of the variety of livestock (cows, sheep, goats, camels, donkeys) and their different feeding habits, the kind of livestock raising practiced by the Sahelian nomads using the ecological resources in an optimal way is the most "intensive" cattle raising, although it is called "extensive."

Many nomad participants think it is advisable to reduce the size of herds, because the larger the herd the farther they must move to find pasture and water, and the greater are the risks of losing animals, especially during drought periods. Nevertheless, the "security" of having a large herd still seems to exert a stronger attraction on many minds. A reduction in the size of herds only seems conceivable if it is possible to rely on other sources of income, such as the possibility of combining agriculture with livestock raising or of carrying out some other lucrative business. In any event, it is necessary to find something to compensate for a smaller number of cattle.

4) Difficulties of Livestock Raisers' Cooperatives

Members of cooperatives who were present at the seminar talked at length about the organizational and operational difficulties of their cooperatives. Apart from practical problems, such as cooperatives' management, correct weighing procedures, supplies, product quality, transportation, adequate profit margin, etc., the fundamental question of internal difficulties within nomad society itself and their influence on the proper functioning of cooperatives was also discussed. It was pointed out that there is a danger of perpetuating the inequalities of the traditional caste system through the management of cooperatives. Positions of responsibility are given to traditional leaders and never to ex-slaves. This contributes to the enrichment of those who already have some means, to the detriment of those who are totally destitute. By financing such cooperatives, the State tends to strengthen existing social structures. It was argued that in any traditional society positions of responsibility and which entail contact with an outside authority (State) are nearly automatically designated by the community itself to those of its members who have a higher social status, because of the moral guarantee they are supposed to offer. It would be extremely difficult to change such traditional attitudes, at least in the immediate future.

In the case of the Malian cooperatives, beneficiaries of loans to buy cattle (which are made with the initial funds supplied by the *Service de la Cooperation*) are selected by the whole assembly of members, so that

there is a fair distribution. Later on, when the cooperative will have made some profit and thus constituted its own fund, it will be able to and shall make loans for the purchase of cattle to all its members, regardless of their economic or social situation.

5) Livestock Marketing Mechanisms

Participants recognized the need for a change of mentalities in this regard. Next to the traditional system of cattle commercialization, which operates through salesmen and middlemen living around the cattle markets, a new "modern" system is appearing: calves are bred in "birth areas" and then sold to "fattening areas" where they are fed for slaughter and resold at a profit on consumer markets. Some countries have opted for a ranching system which is very controversial, because of the exploitation it means for individual herdsmen. With this new system, cattle producing countries are organizing themselves as exporters of great quantities of cattle and meat to the coastal countries and even to Europe. At this level, there is also a problem of cooperation among States. Efforts are being made in this direction by Sahelian countries through the creation of regional bodies such as the CEBV (*Communauté Economique du Bétail et de la Viande*).

The traditional system of commercialization is still very active, although some countries, like Mali, are making efforts to reduce the influence of salesmen and especially middlemen who can exploit herdsmen. Frequently the middlemen carried out the sales for the herdsmen, cheated on the price, and pocketed a substantial proportion of the sales price plus a declared commission of up to ten per cent. New legislation in Mali now obliges middlemen to sell the cattle only in the presence of its owner. Middlemen existed because of the need for cattle raisers to make use of the services of people who are familiar with the market and can help them to overcome the language difficulties. These middlemen were frequently relatives of herdsmen or had been recommended by friends. They gave their clients board and lodging and made them feel at ease, thus gaining their confidence, only to betray it later.

COMMENTS

The key factor to the success of this seminar was the willingness of most of the nomad participants to speak out openly. Many of the most meaningful interventions came from participants seated on *nattes* (straw carpets) rather than from the "intellectual" side, some of whom prefered to sit on chairs in order to be able to take notes.

The question of school attendance by nomad children, for instance, generated a lot of discussion, the nomads perceiving it as an incentive to sedentarize since, as they said, if a family settles down it will be easier for parents to follow the progress of their children in school. Further, an educated child will stand a better chance of getting a paid job which will enable him to survive and to help his family in case of disaster. One participant brought up the question of cultural alienation through

schooling. The question was almost dismissed as irrelevant by other "intellectual" participants who argued that many changes have been taking place in the school system in order to better adapt them to African realities.

It is true that some changes have been introduced into school curriculae to bring them closer to rural African realities. However, the results have been rather disappointing until now. The discussion revealed that nomads were not so much concerned with the possible alienation or uprooting of their children through school attendance. They have seen during the drought that the few nomad families who could rely on a relative working in town, usually in the civil service, managed to weather the ensuing crisis much better than those that did not have such a relative. They realize now that some of them will have to take up productive activities other than cattle raising and that this may be the case for a long time. Therefore, they want their children to go to school so as to learn some new skills which *they* did not learn and to be able to find jobs in the civil service, in factories, in business, in the construction industry, etc. They do not seem to have realized, however, that the present schooling system does not prepare children adequately for such jobs, that the number of unemployed in the towns is already very high, and that there are not enough civil service jobs to absorb all those who finish school. (This is quite apart from the fact that civil service jobs usually do not produce material output in West Africa and can rarely be said to contribute to the economic development of their countries.) Unfortunately, the discussion of this matter was not pursued to its logical conclusion because some of the nonnomad participants insisted that "alienation" was not a problem. It would seem that nomads have chosen the lesser of two evils: having their children educated gives them an added guarantee in case of future disaster, even if it means that they would leave their families and migrate to the towns.

Another issue that produced some waves was the question of "true participation in economic development" introduced by another "intellectual" participant. To further explain what he meant he gave an example: "There are cases when the Government wants to do something specific in one area — mobilize rural populations for a road-building project, for instance, and the people concerned might find it more urgent to use their labor force for another project — say dispensary or school building. Usually the Government imposes its own view and obliges the people to work on a given project, through its local administrators, and then claims it has done something for the people. The people, however, do not consider such projects as 'their' thing and do not care what happens to them. This explains the failure of many projects. Now, if the Government were to discuss with the people of an area what *they* wanted before deciding on a project, and if the people had a chance of getting their own ideas adopted, then there would be true participation. Could any of the participants give an example where this has happened?" No answer came from the nomad participants. Either they

did not fully understand the question or they did not clearly perceive the divergence of interests often noticed between Third World Governments and their populations. However, one "intellectual" nomad gave the example of a borehole project in eastern Mali sponsored by a German organization. The head of the project, who was preparing a doctoral thesis on the subject, seemed much more interested in the number of wells than in their depth. As a result, most of the wells dried out while the project was still continuing. The local population protested and the Government finally got the Germans to stop digging new wells and to deepen those already existing. The well project was designed to supply water to herdsmen living in the Gourma Region located between the Niger River bend and the Upper Volta border.

Participants pointed out that not all of the well-digging projects were designed for the sole purpose of supplying water to herdsmen. They had political implications: for instance, the undeclared intention of Governments to attract the herds of their neighbors into their own countries by placing wells along the border lines. An example of this political maneuver are the wells still in operation along the Sengalese border with Mauritania.

Moving to broader considerations about the nomad economy, participants displayed a great deal of insight when talking about regional cooperation and local cooperatives such as the ones in operation in the Sixth Region of Mali. They pointed out that it is much easier to get funds from foreign sources to set up modern ranches than it is to find funds for local cooperatives aiming at reconstituting the herds of nomad pastoralists.

The institution of modern ranches in West Africa raises serious problems. Some Governments have opted or are considering the advantages of opting for so-called "modern" livestock raising methods. The plans most widely discussed and most likely to be followed call for the separation of Sahelian cattle raising areas into two sections: the "*zones naisseurs*" (birth areas) in the northern parts of the Sahel where nomads would breed cattle which would be bought from them while still very young and, therefore, at relatively low prices, and the "*zones d'embouche*" (fattening areas) to which the young cattle would be taken to be fattened on ranches and then exported to the coastal countries, Europe, and the U.S. On these consumer markets the cattle would fetch a much higher price. The greatest profit would thus go to ranch owners, i.e., Governments or foreign corporations. A few ranches are already in operation in Senegal and Niger. The experience there shows that a young heiffer bought from an individual pastoralist at about $30 sells for about $300 to $400 after three to four months of "fattening" on a ranch. The ranches occupy huge areas enclosed by barbed wire fences and thus take away from the normal pasture grounds of nomads. Within the ranches herds graze separate fields on a rotating basis, thereby allowing for constant renewal of the grass. No doubt this is a rational way of using the scarce resources which the Sahelian environment of-

fers. The clear implication, however, is that nomads will become suppliers of cheap raw material and will have virtually no bargaining power vis-a-vis the practically monopolistic purchasing position of the ranches. Another point is that ranches logically would be set up on the best grazing lands with the best water supply, thus leaving the individual herdsman compelled to make a living on the poorer lands of an already semidesert territory. Participants warned against the danger for individual nomads of such a ranching policy, because of its implicit exploitative nature. Of course, Governments stand to gain by such a policy, because ranches make it much easier to collect taxes on cattle and because of the export duties and foreign currency earnings they would provide. It can be argued that Governments can then spend more money on development activities in nomad communities. But would they, and would this really provide a better life for nomads?

An important aspect of the discussions was the sensitivity and openness of all participants in their earnest search for real solutions to the problems of nomad pastoralism. This was illustrated by questions introduced here and there by nonnomad participants, such as the following, emphasizing the common tendency—an aftermath of the drought?— to rely on Governments or foreign aid: "Our talks yesterday have shown that droughts are common and may happen again. It is true that people cannot control rain, but it is also true that they can join together in order to minimize the effects of natural disasters. It is therefore important that herdsmen institute their own cooperatives and, although help is necessary, it should not always be expected. People do rely on help, but what are they ready to do *by themselves*, for themselves, in order to prevent the consequences of new disasters?"

The main conclusions which can be drawn from the discussions of this seminar are summarized below:

(a) Nomads particularly suffered from the long 1968-74 drought. It caused a lot of human suffering, social disruption, and material loss among them.

(b) The drought and its aftermath have strongly marked nomads in the Sahel and led them to reconsider their lifestyle and traditional activities.

(c) The first and foremost concern of nomads in the immediate future is to find new means of livelihood. They are willing and able to try new productive activities and have proved it.

(d) Nomads want to continue livestock raising, their traditional activity and way of life, but they want to do it in a more rational and economical manner, by organizing themselves into cooperatives and by appropriate management of available grazing lands.

(e) Where available land is fertile and there is enough water, nomads want to combine livestock raising with agriculture. This gives them an immediate means of subsistence while they are reconstituting their herds and later will be an added guarantee or safety valve in case of

natural disaster.

(f) The two preceding conclusions imply that nomads favor some kind of sedentarization or semisedentarization, either to grow their crops or to manage their grazing lands (which can cover quite a vast area).

(g) School attendance by nomads' children is now accepted more willingly, as a means of ensuring that future generations can learn to do other jobs than cattle raising, as an added means of family income, and so as to allow nomads to better defend their own interests within national development plans.

(h) Nomads want to receive advice from Government development cadres and have an opportunity to express their own views on development projects which affect them or their regions. They want to participate in the planning and implementation of development projects. This requires adequate information and sharing in decision making.

(i) It is hoped that cattle raisers' cooperatives (which are multifunctional: producers' and consumers' coops at the same time) and improved livestock marketing will ensure that nomads get an equitable share of the income derived from the Sahelian livestock industry. If ranches are to be developed on a large scale in the Sahel, adequate safeguards must be found to protect nomads from exploitation.

Background Papers

Four background papers were prepared by Tahirou Diao for this seminar and distributed to those participants who read French. These papers contain excerpts and summaries of various articles and reports on nomads and development out of the considerable volume of documentation on this subject which the Dialogues staff have collected. They also reflect some of our own thinking on this subject.

Although these papers were not discussed as such at the seminar, because the majority of participants did not read French, they did arouse the interest of several participants, and even some nomads who do not speak a word of French insisted on having their own copies, presumably to have them translated by some friend. Unfortunately these papers are available only in French, but a good part of the resource material used is in English and can be found through the sources quoted at the end of each paper. The following are the four papers which are appended to the general report:

1. "*Sahel et Développement*," translated and adapted from the following articles by Jeremy Swift, Institute for the Study of International Organizations, Sussex University, Great Britain:

   (a) "Development Options for the Sahel"

   (b) "The Future of Tuareg Pastoral Nomadism in the Malian Sahel"

   (c) "Pastoral Nomadism as a Form of Land Use: The Tuareg of the *Adrar n Iforas*"

(d) "Droughts and Famines of the Sahel," published by Francois Maspero in *Collection Dossiers Africains*, Jean Copans, ed., Paris, 1975.

2. "*Nomades et Développement*," excerpts from "Pastoral Nomads and Development," by Clare Oxby, International African Institute, London, 1975.

3. "*Reliance des Coopératives d'Eleveurs en Sixième Région*," summary of a report by André Marty.

4. "*Quelques Réflexions sur le Probleme de la Participation des Populations Nomades au Développement*," some reflections on the question of participation of nomads in development, pointing out the current misconceptions about this problem, by Tahirou Diao of the International Dialogues staff.

LISTE DES PARTICIPANTS
SEMINAIRE INTERNATIONAL SUR
"LA PARTICIPATION DES POPULATIONS NOMADES AU DEVELOPPEMENT"
HAOUSSA-FOULANE (GAO)
14 au 21 MARS 1976

1. MADIT AG ABLII	*Eleveur, Chef de fraction* Idougouritène, *Chef de Secteur de la Coopérative d'Eleveurs,* MENAKA, MALI
2. ARALI AG ISSATA	*Eleveur, Chef de fraction* Zoumbouroutène, MENAKA, MALI
3. MOHAMED AG RHISSA	*Eleveur, Chef de fraction* Tabahou, Anderamboukan, *Cercle de* MENAKA, MALI
4. HAMADOU AG CHEICK SALIHOU	*Eleveur, Chef de fraction* Aglitarma, *Trésorier de la Coopérative d'Eleveurs,* TALATAYE, MALI
5. MOHAMED HAMADOU AG AYOUBA	*Eleveur, Conseiller de fraction* Hanakatène I, *Président de la Coopérative d'Eleveurs,* TALATAYE, MALI
6. ALMOUMIN AG KIYOU	*Eleveur, Chef de fraction* Chamanamasse, *Chef de Secteur de* Tin Aouker *de la Coopérative d'Eleveurs,* DJEBOCK, MALI
7. MOSSA AG TIMIKA	*Eleveur/cultivateur, Chef de fraction* Kel Bardag II, *Chef de Secteur de* Djebock *de la Coopérative d'Eleveurs,* DJEBOCK, MALI
8. BOGASSRIA AG EL BOUKHARI	*Eleveur, Chef de fraction* Igheneghessen I, *Chef de Secteur de* Samit *de la Coopérative d'Eleveurs,* DJEBOCK, MALI

The previous numbered page in the original document was blank

9. MOHAMED AG MADESSA	*Eleveur, Représentant du Chef de fraction* Chérif, *Chef de Secteur d'*Imenasse *de la Coopérative d'Eleveurs,* DJEBOCK, MALI
10. MOHAMEDOU AG HOMEIDI	*Eleveur, Marabout, Chef de fraction* Kel Tikeratène, DJEBOCK, MALI
11. BANA AROUKACHI	*Eleveur/cultivateur, Chef du village* Berger, *Arrondissement* HAOUSSA-FOULANE, MALI
12. YEHIA AMARA	*Eleveur/cultivateur, Chef du village* Gabero Gaina, *Président de la Fédération Primaire de l'Arrondissement* HAOUSSA-FOULANE, MALI
13. MOHAMED EL MAOULOUD *dit* **IDOUAL AG MOHAMED ELHADI**	*Eleveur/cultivateur, Chef du village* Tin Aicha II, *Cercle de* GOUNDAM, MALI
14. HANATALL AG MOHAMED	*Eleveur/cultivateur, Marabout,* Tin Aicha I, *Cercle de* GOUNDAM, MALI
15. MOHAMED ISSA AG MOHAMED EL MAOULOUD	*Maître du Premier Cycle,* Tin Aicha, *Cercle de* GOUNDAM, MALI
16. Mlle EVA MYSLIWIEC	*Représentante du Service Quaker, Projet* Tin Aicha, *Développement Communautaire,* GOUNDAM, MALI
17. AMBERY AG RHISSA	*Directeur de l'Enseignement du Second Cycle,* Goundam, *Cercle de* GOUNDAM, MALI
18. MAMADOU SOUNTOURA	*Directeur Adjoint, Service de la Coopérative,* GAO, MALI
19. ANDRE MARTY	*Consultant, Service de la Coopérative,* GAO, MALI
20. HAMID AG MOHAMED LAMINE	*Directeur Regional des Eaux et Forêts,* GAO, MALI
21. Dr NINANKORO FOMBA	*Ministère de la Santé et des Affaires Sociales,* BAMAKO, MALI
22. SEKOU OUMAR BA	*Professeur à* I.D.E.P., B.P. 3185, DAKAR, SENEGAL
23. PAPA SYR DIAGNE	*Secrétaire Général de la* S.A.E.D., B.P. 74, SAINT-LOUIS, SENEGAL

24. Mme BARSO DIAO	*Assistante de Recherches*, I.R.S.H., B.P. 318, MIAMEY, NIGER (VOLTAIQUE)
25. OUMAR BOUBAKAR	*Eleveur*, Boucoukou, FILINGUE, NIGER
26. CHABGA BI CHIMBIDDO	*Cultivateur/éleveur Maisamari* d'Abala, FILINGUE, NIGER
27. OUDA MANOUGA	*Eleveur*, Abala, FILINGUE, NIGER

ORGANISATEURS:

Jean-Pierre ALLAIN, *Directeur des* D.I.A.O., B.P. 971, LOME, TOGO
Mme Annelies ALLAIN, *Directrice des* D.I.A.O., B.P. 971, LOME, TOGO
Tahirou DIAO, *Directeur Adjoint*, D.I.A.O., B.P. 971, LOME, TOGO

FINANCIAL SUMMARY
TIN AICHA

October 1, 1974, through December 31, 1980

A. Income

— Interchurch Coordination Committee for Development Projects — ICCO (Netherlands)	$215,528
— Protestant Central Agency for Development Aid — EZE (Federal Republic of Germany)	142,788
— Brot Für Die Welt (Federal Republic of Germany)	46,066
— Quäker - Hilfe (Germany)	17,430
— Komitte Twee (Netherlands)	15,000
— Oxfam (United Kingdom)	25,000
— Individual Contributions (United States)	50,659
TOTAL	$512,471

B. Expenditures

— Project Costs: Canteen, construction, cooperative, equipment, expatriate personnel, field administration, livestock purchasing and upkeep, materials, medical supplies, reforestation, salary indemnities for national staff, school supplies, seed purchase, social worker aide, travel, vehicle purchase and maintenance, other	$421,297
— Project Planning, Support, Development, and Coordination	91,174
TOTAL	$512,471

The previous numbered page in the original document was blank

The American Friends Service Committee (AFSC) bases its work on the beliefs and testimonies of the Religious Society of Friends (Quakers). The AFSC carries on its programs, at home and abroad, through its Community Relations Division, International Division, Peace Education Division, and ten regional offices. The AFSC holds to the primary Quaker conviction that every person possesses that of God within her/himself and thus is a person of absolute worth and dignity. This basic belief is combined with practical experience and leads the AFSC to seek peace, justice, and equality, and to work with people to develop their promise and to extend their options. Both means and ends in the work rest on a constant search for Truth, being receptive to experimentation and change, learning from whatever source, flexibility, and an attitude of openness about perceptions and definitions.

National Office • **Philadelphia** 1501 Cherry Street, Philadelphia, Pennsylvania 19102

Regional Office • **Atlanta** 92 Piedmont Avenue, NE. Atlanta, Georgia 30303 • **Baltimore** 317 East 25th Street, Baltimore, Maryland 21218 • **Cambridge** 2161 Massachusetts Avenue, Cambridge, Massachusetts 02140 • **Chicago** 407 South Dearborn Street, Chicago, Illinois 60605 • **Dayton** 915 Salem Avenue, Dayton, Ohio 45406 • **Des Moines** 4211 Grand Avenue, Des Moines, Iowa 50312 • **New York** 15 Rutherford Place, New York, New York 10003 • **Pasadena** 980 North Fair Oaks Avenue, Pasadena, California 93301 • **San Francisco** 2160 Lake Street, San Francisco, California 94121 • **Seattle** 814 N.E. 40th Street, Seattle, Washington 98105

Contributions to AFSC are deductible for Federal income tax purposes

No. 1500—6-82—AFSC

$8.50

BEST COPY AVAILABLE